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Item 7 (b) of the provisional agenda
Outcomes of the in-depth reviews carried out by the Conference of European Statisticians (CES) Bureau

In-depth review of statistics on social protection

Prepared by the Secretariat

Summary

The present note is the in-depth review paper on the measurement of social protection. The Bureau of the Conference of European Statisticians conducted the in-depth review at its meeting in January 2014. The purpose of the reviews carried out by the Bureau is to improve coordination of statistical activities in the region of the United Nations Economic Commission for Europe, identify gaps or duplication of work and address emerging issues.

The note summarises the international statistical activities in the area, identifies issues and problems, and makes recommendations on possible follow-up actions in this area.

The outcome of the review is provided in document ECE/CES/2014/9/Add.1.

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I. Introduction

1. The Bureau of the Conference of European Statisticians (CES) regularly reviews selected statistical areas in depth. The aim of the reviews is to improve coordination of statistical activities in the UNECE region, identify gaps or duplication of work, and address emerging issues. The review focuses on strategic issues and highlights concerns of statistical offices of both a conceptual and a coordinating nature.

2. The CES Bureau selected social protection for an in-depth review at its meeting in February 2013. In the absence of a volunteer country to prepare the review paper, the secretariat undertook this task. The current paper provides the basis for the review by summarising the international statistical activities and identifying issues and problems.

3. Work on social protection statistics began in the late 1970s, with Eurostat and EU member countries' joint development of the European system of integrated social protection statistics (ESSPROS). ESSPROS focuses on the "coverage of precisely defined risks and needs including health, disability, old age, family and unemployment." The framework comprises a core system and modules and stipulates the collection of both quantitative and qualitative data.

4. In the 1990s, OECD developed its Social Expenditure Database (SOCX) to monitor trends in aggregate social expenditure and changes in its composition. The database contains time series spanning from 1980 to 2010 for OECD member countries.

5. At present, a large number of international organisations and bilateral institutions are involved in the collection, harmonization and dissemination of social protection statistics, including ILO and the World Bank, as well as the organisations mentioned above. Enhancing social protection is one of the main aims of ILO, which advocates a minimum level of social protection – a social protection floor. The World Bank's work focuses on developing countries, and disseminates harmonized data through its Atlas of Social Protection – Indicators of Resilience and Equity (ASPIRE) project.

6. In response to a request from the G20 Development Working Group, the Social Protection Inter-agency Cooperation Board (SPIAC-B) was formed in 2012 to coordinate the work of various organisations on social protection. The Board aims to reduce duplication of effort by harmonizing different social protection tools. Its most recent meeting on 29 October 2013 was attended by participants from 29 international organisations and bilateral institutions.

7. Some of the challenges involved in collecting reliable social protection data include measurement issues and a lack of internationally agreed upon standards and classifications. International organisations are often unable to exchange data because they use separate classification schemes. Disparate challenges are faced in developed countries and in developing countries, in part because of the different data sources used. In developed countries, social protection data mostly come from administrative sources and registers, whereas in developing countries, the data must be obtained from household surveys.

8. The different organisations working on social protection statistics need to coordinate their efforts. In addition to direct partnerships that already exist between organisations, SPIAC-B provides an international mechanism to harmonize work on social protection.

II. Scope of social protection statistics

9. The scope of social protection is not universally agreed upon. According to the DISA Classification of Statistical Activities, social protection comprises "statistics on measures to protect people against the risks of inadequate incomes associated with

unemployment, ill health, invalidity, old age parental responsibilities, or inadequate income following the loss of a spouse or parent, etc." It includes "statistics on pension beneficiaries, social security schemes, social protection expenditure, etc.", but does not include "insurance companies as economic actors" or "pension funds as actors in financial markets."

III. Overview of international statistical activities

A. Interstate Statistical Committee of the Commonwealth of Independent States (CIS-STAT)

10. Under the heading of social welfare, CIS-STAT collects, processes, analyses and disseminates social protection and pension security data provided by national statistical services as well as information on the numbers of disabled persons in the Commonwealth countries. It prepares an annual report on the numbers of pensioners and pension security in the Commonwealth countries.

11. In the future, CIS-STAT will also provide advisory services to national statistical services on the organization of social security statistics in the Commonwealth countries.

B. International Labour Organization (ILO)

12. The ILO Social Security Inquiry collects statistics on social security expenditure, financing, coverage and benefits from both developed and developing countries. Its revised methodological approach is as compatible as possible with SNA, the EUROSTAT-ESSPROS approach to social protection revenue and expenditure statistics, the OECD Social Protection Expenditure database and IMF's 2001 Government Finance Statistics guidelines. In addition, coverage and benefit level data are collected and used for constructing coverage indicators by social security risk or social security function. ILO collects data directly from the institutions that manage national social protection schemes, especially data on the coverage of the population (active contributors, affiliated persons and actual beneficiaries), benefit levels, expenditure and financing.

13. Data are collected and disseminated through the ILO Social Security Database. A limited and regularly updated set of indicators on social security expenditure and coverage is now available for most East European countries starting from 2000 to the latest available year. First results for nine countries in South-Eastern Europe were summarized in ILO (2005): Social Security Spending in South-Eastern Europe, Budapest: ILO. More recently updated data and indicators covering both expenditure and coverage have been published in the first edition of the World Social Security Report 2010/11, which is the first in a series of World Social Security Reports which will also help to monitor the global progress on social security coverage and thus support the ILO's campaign to extend coverage.

14. Historical data (1949-1993) on revenues and expenditure of social security schemes from 22 European countries are available on an online database developed by the EURODATA Research Archive of the Mannheim Centre for European Social Research (MZES) in cooperation with ILO. Data for other countries are also available online on the ILO website.[1]

15. ILO has also published Social Protection Expenditure and Performance Reviews (SPER), which contain a broad range of statistics.

[1] http://www.ilo.org/public/english/protection/secsoc/areas/stat/css/index.htm

16. ILO has developed, in cooperation with the Council of Europe, a manual on statistical data requirements and indicators related to reporting on compliance with ILO Convention No. 102 on minimum standards in social security and with the European Code of Social Security.

17. ILO intends to review and, if necessary, propose revisions to further develop the international standards on statistics of social security/social protection as laid down in the Resolution concerning the development of social security statistics, adopted by the 9th ICLS (1957). This was discussed at the 17th ICLS.

18. Within the framework of the activities on the informal economy, the Social Protection Sector is developing a module with a limited number of questions on social protection to be integrated into the regular household surveys.

19. Over a period of four years (2009 to 2013), the Monitoring and Assessing Progress on Decent Work (MAP) project, with funding from the European Union, aims to facilitate the identification of decent work indicators that are relevant at the national level (based on the outcome of the Tripartite Meeting of Experts held in September 2008); support data collection; and use the collected data for an integrated policy analysis of decent work. Social protection is one of the four strategic objectives of the Decent Work agenda.

20. ILO runs the Global Extension of Social Security (GESS), a global knowledge sharing platform that "aims to facilitate the exchange of information and ideas, capture and document experiences, identify knowledge gaps, create new knowledge and promote innovation."[2]

C. The International Social Security Association (ISSA)

21. ISSA continues its work to develop the statistical capacity of its members in developing countries and contributes to the development of international standards on social security/social protection statistics.

22. In collaboration with the United States Social Security Administration, ISSA collects information on the range of contingencies covered by social security schemes and disseminates it with Social Security Programmes throughout the World (SSPTW)[3] and with the ISSA information service, Social Security Worldwide. ISSA also collects data on the legal framework and governance of Public Social Insurance Reserve Funds as well as their asset allocation and expenditure.

D. The Social Protection Inter-agency Cooperation Board (SPIAC-B)

23. SPIAC-B, an interagency coordination mechanism that comprises participants from international organizations and bilateral institutions, was established as a result of the G20 Development Working Group. The board was set up to "enhance global coordination and advocacy on social protection issues and to coordinate international cooperation in country demand-driven actions." Four meetings have been held so far, the most recent of which was held on 29 October 2013 in Brussels. The next meeting will be held in May 2014 in Washington.

24. The reports of all SPIAC-B meetings are available online.[4]

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[2] http://www.social-protection.org/

[3] http://www.ssa.gov/policy/docs/progdesc/ssptw

[4] http://www.ilo.org/newyork/issues-at-work/social-protection/social-protection-inter-agency-cooperation-board/lang-en/index.htm

E. Eurostat

25. ESSPROS is a common framework developed in the late 1970's by Eurostat and the European Union (EU) Member States. It provides a coherent comparison between European countries of social benefits to households and their financing, thus making an international comparison of the administrative national data on social protection possible.

26. The ESSPROS manual elaborates that a social protection intervention can involve either the provision of financial resources to individuals or the direct provision of goods or services. Only interventions from public or private organisations – rather than individuals – are included. ESSPROS also outlines an additional requirement that the intervention must not be provided in exchange for money, goods or work. Interest-bearing loans and employer-provided benefits whose costs are deducted from the individual's salary are examples of services that do not fall under social protection for this reason. Interventions need not be unconditional to qualify as social protection, however. An intervention can stipulate, for example, enrolment in a training program.

27. Eurostat regularly produces indicators for monitoring the Europe 2020 strategy and support the open method of coordination for social protection and social inclusion.[5] Indicators are used to monitor the overarching objectives, as well as the specific objectives of the three strands: social inclusion, pensions and health care. The main sources are the EU-Statistics on Income and Living Conditions (EU-SILC) and the EU Labour Force Survey (EU-LFS).

28. The indicators are presented in three categories – EU, National and Context. The commonly agreed EU indicators contribute to a comparative assessment of Member States' progress towards the common objectives on social protection and social inclusion. The commonly agreed national indicators are based on commonly agreed definitions and assumptions that provide key information to assess the progress of Member States in relation to certain objectives. Additionally, key context information is identified to assess the indicators.

F. European Foundation for the Improvement of Living and Working Conditions (Eurofound)

29. Eurofound conducted its fifth European Working Conditions Survey in 2010. The overview report, which contains a chapter on quality of work and employment, is now available online. One of the dimensions of this chapter is "ensuring career and employment security", which includes discussion of social protection.[6]

G. Organisation for Economic Co-operation and Development (OECD)

30. The OECD's Social Expenditure Database (SOCX) has been developed to monitor trends in aggregate social expenditure as well as changes in its composition. SOCX covers 34 OECD countries for the period 1980-2009/10 and estimates for 2010-2012. It contains reliable and internationally comparable statistics on public and private (mandatory and voluntary) social expenditure at the programme level, classified under the major social policy areas. These areas are as follows: Old age, Survivors, Incapacity-related benefits, Health, Family, Active labour market programmes, Unemployment, Housing, and Other

[5] http://ec.europa.eu/social/main.jsp?catId=756&langId=en

[6] http://www.eurofound.europa.eu/pubdocs/2011/82/en/1/EF1182EN.pdf

social policy areas. It also includes estimates of net total social spending for 2009 for 30 OECD countries.[7]

31. In November 2012, SOCX was updated together with the publication of a brief on social spending after the crisis.

32. The "How's Life?" initiative, which "paints a comprehensive picture of well-being in OECD countries and other major economies, by looking at people's material living conditions and quality of life across the population." One of the components of the initiative is a section on "Well-being in the workplace: Measuring job quality."

H. The World Bank

33. The ASPIRE project provides harmonized data on social protection programs, mostly in developing countries, based on household surveys.[8] The World Bank's ADePT Social Protection software is used to produce information on ten indicators: average per capita transfer, coverage, benefit incidence, beneficiary incidence, generosity, Gini inequality reduction, poverty headcount reduction, poverty gap reduction, cost benefit ratio and social protection overlap. Currently, 56 countries are covered by the ASPIRE project. The project aims to eventually cover a total of 120 countries.

34. The Social Protection Assessment Results of Country Systems (SPARCS) is "an inter-agency initiative that aims to improve the performance of Social Protection and Labor (SP&L) systems by creating an 'open source' platform for collaboration, based on defining and assessing key system metrics and outcomes."[9] Following the October 2013 SPIAC-B meeting, SPARCS will be renamed the Inter-agency Social Protection Assessment and will be guided by SPIAC-B.

35. Recently, the World Bank held a workshop on the use of household survey data for social protection statistics on 4-5 November 2013, in cooperation with ILO, OECD, ISSA, UNDP, FAO, ODI, GIP SPSI, IADB/BID, DAEI, Helpage, UNICEF and DFID. The workshop was titled "Towards Better Data on Coverage and Impact of Social Protection: The Role of Household Survey Data."

I. United Nations Economic Commission for Europe (UNECE)

36. UNECE acts as secretariat for the expert group on measuring quality of employment, which was formed in February 2012. The expert group is chaired by Germany and comprises representatives from a number of countries and international organizations. It will present the full version of its "Statistical Framework for Measuring Quality of Employment" to the CES Bureau meeting in October 2014. One of the dimensions of the framework is devoted to security of employment and social protection, which includes indicators on contributors to pension schemes and unemployment insurance.

37. The work on measuring quality of employment is coordinated with four international organisations' closely linked initiatives:

- The ILO's Decent Work Indicators, which aim to improve quality of work in countries based on four strategic policy objectives (one of which is extending social protection).
- The European Union's quality of work indicators and the Europe 2020 strategy.

[7] www.oecd.org/els/social/expenditure
[8] http://worldbank.org/aspire/
[9] http://go.worldbank.org/9GC4EAU0F0

- OECD's "How's Life?" initiative, which sets out to measure well-being, including a section on "Well-being in the workplace: Measuring job quality."
- Eurofound's set of indicators and the European Working Conditions Surveys.

IV. Issues and Challenges

A. Lack of internationally agreed standards, definitions, classifications and international comparability

38. During the ILO-hosted workshop on "Mapping existing international social protection statistics and indicators that would contribute to the monitoring of social protection extension through Social Protection Floors (SPFs)", which was held in Geneva between 13th and 15th March 2013, defining and classifying social protection data was identified as a main issue. It was noted that although there are overlaps, not all international organisations use the same classification criteria, so it is often not possible to exchange data amongst organisations. In some cases, different classifications may stem from the organisations' different objectives (for example, the World Bank's focus on the needs of developing countries).

39. One of the aims of SPIAC-B is to harmonize social protection standards and definitions. At its third meeting in February 2013, the World Bank and ILO presented a joint proposal on international social protection data harmonization. The proposal resulted from a workshop on social protection financing held in London in November 2012, during which international organisations agreed to prepare terms of reference for "cooperation in the areas of standardization of the terminology and classifications used, harmonization of the data collection efforts and different databases, and supporting countries to enhance their capacity in producing reliable social protection data and establishing national social protection statistical systems."

B. Measurement problems

40. Following resolutions in 2007, members of the European Union are mandated to comply with the guidelines set out in the ESSPROS manual. However, not all countries have been able to apply all of the ESSPROS methodology. In Eurostat's consolidated quality report released in 2013 (on 2011 social protection data), four countries reported measurement problems that arose from difficulty of applying the methodology. More commonly, measurement problems arose from issues with individual data sources. These problems were experienced in fourteen countries. In some cases, additional data sources were available, but in other cases, the problems led to omitted figures. Incomplete geographical coverage was also an issue, though it was only reported by four countries. Still, the consolidated quality report concludes that, overall, "data for almost all the countries are of good quality and useful for analytical purposes."[10]

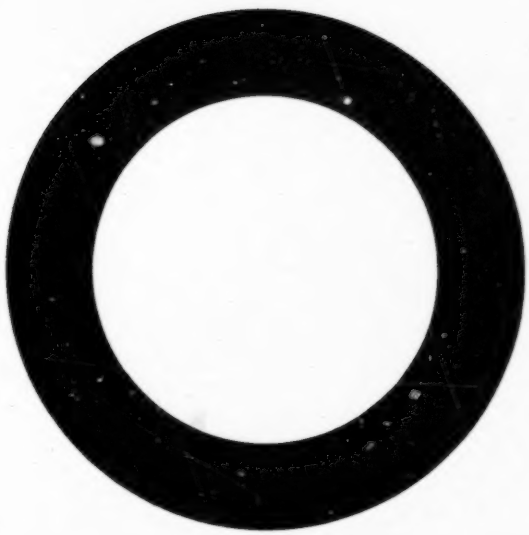
41. Since the main sources of social protection data within EU are administrative sources and registers, the measurement problems within EU mostly concern coverage. Outside EU, however – especially in developing countries – organisations rely on household surveys for social protection data. While several organisations have produced generic questions on social protection to be included in the surveys, the questions to include are not universally agreed upon. Many countries still do not include any questions on social

[10] http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-11-030/EN/KS-RA-11-030-EN.PDF

protection in their household surveys and others include questions on social protection but do not analyse or disseminate the data.

V. Conclusions and recommendations

42. While social protection statistics are mostly reliable and comparable in the European Union, there remains much work to be done to address challenges faced by other countries and in particular by the less developed statistical systems. A large number of organisations are involved in the collection, harmonisation and dissemination of social protection statistics, but the results of their efforts are sometimes difficult to reconcile because they are based on different classification schemes. There is a need for better coordination amongst the organisations.



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Outcome of the in-depth review of measuring social protection

Note by the Secretariat

Addendum

Summary

This note provides information on the outcome of the in-depth review of measurement of social protection, carried out by the Bureau of the Conference of European Statisticians in January 2014.

The review summarised the international statistical activities in measuring social protection, identified issues and problems, and made recommendations on possible follow-up actions in this area.

The in-depth review was based on a paper by the Secretariat. The updated in-depth review paper is available as document ECE/CES/2014/9.

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I. Introduction

1. Each year, the Bureau of the Conference of European Statisticians (CES) reviews selected statistical areas in depth. The purpose of the reviews is to improve coordination of statistical activities in the region of the United Nations Economic Commission for Europe (UNECE), identify gaps or duplication of work, and address emerging issues. These reviews focus on strategic issues and highlight concerns of statistical offices of both a conceptual and coordinating nature.

2. The CES Bureau selected social protection for an in-depth review at its meeting in February 2013. In the absence of a volunteer country to prepare the review paper, the Secretariat undertook this task. The review summarised the international statistical activities in measuring social protection, identified issues and problems, and made recommendations on possible follow-up actions in this area.

II. In-depth review discussion and decision by the Bureau

3. The Bureau carried out the in-depth review in January 2014 based on a paper by the Secretariat. The updated version of the in-depth review paper is presented as document ECE/CES/2014/9. The conclusions and recommendations resulting from the in-depth review are presented in section V of this document.

4. The following points were raised in the discussion:

(a) Measuring social protection is a complex area of high policy importance. It covers a broad range of issues and involves different institutions at national and international level, many of these from outside official statistics;

(b) The differences in measuring social protection stem from different uses of the data, and it may not be possible to impose universal standards for all purposes. However, a certain level of harmonization is needed to facilitate international comparability and ensure that the data are based on sound methodology. There is currently a momentum to define basic standards in this area. The Social Protection Inter-agency Cooperation Board (SPIAC-B) is working towards harmonization in this field;

(c) Any possible future work on this topic under CES should add value to the existing initiatives;

(d) The suggestions for future work included organizing a CES seminar to discuss the issues and challenges in this area. The following potential work areas were mentioned: developing a small set of internationally comparable indicators on social protection, considering the recipient side of social protection, the parts of society not covered by social protection, use of administrative data, and funding of the social security. It was noted that some aspects of measuring social protection could be considered within the Task Force on poverty.

5. The Bureau recognised the need for more harmonisation in measuring social protection. The secretariat, in consultation with OECD, World Bank and ILO will inform the Bureau about the outcome of the meeting of the SPIAC-B group in May 2014. On this basis, the Bureau will decide about possible further work related to measuring social protection at its October 2014 meeting.

III. Proposal for the Conference

6. The Conference of European Statisticians is invited to endorse the outcome of the in-depth review on social protection, and take note of the updated in-depth review paper by the Secretariat (ECE/CES/2014/9).

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In-depth review of leading, composite and sentiment indicators

Prepared by the Secretariat

Summary

The present note is the updated in-depth review paper on leading, composite and sentiment indicators and official statistics. The Bureau of the Conference of European Statisticians conducted the in-depth review at its meeting in January 2014. The purpose of the reviews carried out by the Bureau is to improve coordination of statistical activities in the region of the United Nations Economic Commission for Europe, identify gaps or duplication of work and address emerging issues.

The note summarises the international statistical activities in the area, identifies issues and problems, and makes recommendations on possible follow-up actions in this area.

The outcome of the review is provided in document ECE/CES/2014/10/Add.1.

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I. Introduction

1. The paper provides the basis for the review of leading, composite and sentiment indicators by reviewing countries' experiences and summarising the international statistical activities in this area. The paper identifies issues and problems, and makes recommendations for possible follow-up actions.

2. The CES Bureau selected leading, composite and sentiment indicators and official statistics for an in-depth review at its February 2013 meeting. To provide basis for the in-depth review, the UNECE Secretariat conducted a short survey of country practices in leading, composite and sentiment indicators. The survey was carried out on 6-20 December 2013, and 38 replies[1] were received from CES countries.

3. The aim of the review is to discuss the role of official statistics in this context. Different indicator sets have been developed by countries and international organizations to meet the demand for evidence-based policy making in a wide variety of areas. New initiatives to develop leading, composite or sentiment indicators are discussed at various fora internationally. Some countries have also been concerned about the possible compromise to statistical institutions' objectivity or reliability when engaging in the production of leading, composite or sentiment indicators.

4. Composite indicators have their roots already in the 1950s and 1960s when the influential environmental movement emerged in response to increasing concerns about the detrimental effects of economic production on the environment. In parallel to this development, the criticism of macroeconomic measures such as GDP increased since they do not incorporate environmental or many other external effects. The many initiatives to correct economic statistics towards providing a better indicator for welfare or sustainable welfare led to the development of a variety of economic composite indicators in the 1960s and 1970s.

5. Accounting for environmental aspects was stimulated by two events in 1972: the report of the Club of Rome on "Limits to growth" and the United Nations (UN) Conference on the Human Environment where the participants agreed that economic development and environmental quality must be managed in a mutually beneficial way. The resulting initiatives were very much academic products and included e.g. the Measure of Economic Well-being (MEW) and the Sustainable National Income (SNI) measure. Various approaches have been developed since, but none of the alternatives have managed to become the official enlarged GDP. These developments have started to impact statistical work.

6. The demand for leading, composite and sentiment indicators continues to grow; the question is how the national statistical offices should react to this challenge? This is a cross-cutting area that is not explicitly included in the mandate of any international organization either. At the same time, different countries and organizations have acquired practical experience with compiling leading, composite and sentiment indicators.

7. The review provides an overview of current work in this area as a starting point for discussing how the official statistical community could meet these challenges. The review

[1] Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Canada, Colombia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Israel, Italy, Japan, Kazakhstan, Latvia, Lithuania, Mexico, Moldova, Mongolia, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovak Republic, Sweden, Switzerland, Turkey, Ukraine and United Kingdom

does not aim at being exhaustive; it rather provides an overview of the main developments in the field composed of numerous, rich new initiatives. The review sourced information from the Internet, the short survey of CES member countries and made use of two stocktaking reports on composite indicators carried out by the United Nations Development Programme (UNDP) and the Joint Research Centre of the European Commission.

II. Scope/Definition of the statistical area covered

8. Composite, leading and sentiment indicators which compare country performance are becoming more and more common, and are increasingly used for policy making. These indicators attract a lot of attention in the media and among policy makers.

9. Leading indicators are time series that show a leading relationship with economic movements such as growth, business-cycle and growth-cycle. Typically, leading indicators are constructed to predict the cycles of industrial production or GDP, which are seen as proxy measures for economic development. A leading indicator may be defined as a time series displaying a reasonably consistent leading relationship with the reference series for the macroeconomic cycle in a country (based on an OECD definition). A scoreboard of indicators with leading abilities can also be used for anticipating turning points in economic activity or the different indicators can be combined into a composite indicator. Leading indicators are used to predict changes in the economy, but their accuracy varies. Examples of variables with leading features may include building permits, unemployment insurance claims, money supply, inventory changes, and stock prices. However, in some countries the leading abilities of these variables may be questionable and are not always supported by empirical evidence. For instance, in Europe the building permits variable has a very low leading power due to its administrative nature.

10. Composite indicators are formed when individual indicators are compiled into a single index on the basis of an underlying model of the multi-dimensional concept that is being measured (OECD definition). The composite indicators measure multidimensional concepts which cannot be captured by a single indicator, e.g. competitiveness, industrialisation, sustainability, single market integration, urbanization, knowledge-based society, etc. Composite indicator can summarise complex, multi-dimensional realities with a view to supporting decision makers by simplifying the reality. Composite indicators may show direction better than a scoreboard of many separate indicators, and make it easier to compare progress of countries over time. In addition to time series cyclical or short-term composite indicators are often produced. Composite indicators can be classified into leading, coincident and lagging indicators.

11. Composite indicators are sometimes poorly constructed, can be easily misinterpreted or may invite simplistic policy conclusions. There is a risk of misuse, e.g. to support a desired policy, if the construction process is not transparent and/or lacks sound statistical or conceptual principles. Also, the selection of indicators and weights could be subject to political dispute and may lead to policy failings. Composite indicators are not necessarily based on a weighted average of a variety of statistical variables but can also be derived by means of statistical models such as factor models, regression models, and time-series models. Traditional macroeconomic indicators may also be seen as composite indicators, such as GDP or gross national product. This in-depth review, however, does not include traditional macroeconomic indicators in the scope of composite indicators as they are produced following international statistical standards in compliance with the Fundamental Principles of Official Statistics.

12. Sentiment indicators are usually designed to show how a group feels about the market, business environment or some other factor. Examples of sentiment indicators

include the Economic Sentiment Indicator (ESI) for the Euro Area and European Union (EU), and the related consumer or business confidence indicators produced by many EU countries. Economic sentiment indicators can provide a wealth of information for macroeconomic policy formulation and analysis. A sentiment indicator seeks to estimate future behaviour that may be impacted by various factors, such as unemployment, inflation, macroeconomic conditions or politics. Sentiment indicators are also derived from business tendency surveys that are carried out to monitor the current business situation and forecast short-term developments, such as turning points in the business cycle. Sentiment indicators are often composite indicators as they are a weighted average of several issues.

13. It is not always easy to classify indicators to leading, composite or sentiment indicators. Consumer and business confidence indicators could also be classified as leading indicators as they are often used for their leading abilities. For instance, the Real Sector Confidence Index, produced by the Turkish central bank, is used as a leading indicator for the overall economic development of the country. It would be possible to classify leading indicators by distinguishing those that rely on one statistical variable and those that are composite leading indicators. Composite indicators could also be further divided into leading, coincident and lagging indicators. These types of classification issues could be considered in further work. Sometimes indicator sets or indicator scoreboards are used instead of composite indicators. The review does not focus on the development and use of scoreboards, although the issue is mentioned as an alternative approach for statistical offices in the survey results. Moreover, the review is not extensive e.g. from the stocktaking reports of UNDP and the European Commission this review only includes regularly updated indicators that are relevant for the CES countries.

III. Overview of country practices

14. The UNECE survey reviewed the involvement of national statistical offices in producing leading, composite and sentiment indicators with the following question: Does your office produce any leading, composite or sentiment indicators? The survey provided useful information on the scope of work of statistical offices in the area. Some replies also covered the activities of national central banks. These cases are mentioned in the text.

A. Leading indicators

15. National statistical offices (NSOs) typically produce statistics that may be used for identifying indications of future developments, for instance flash estimates of key statistics and monthly or quarterly statistics on retail trade, construction, manufacturing, services, capital expenditure, (un)employment, GDP, consumer and producer prices, imports and exports. Several statistical offices produce also indicators of new orders, investments and building permits that may include a leading component. Flash estimates are not considered in this review as leading indicators. However, other indicators that mainly aim at anticipating developments are discussed as leading indicators, although they may be produced using the methodology of composite indicators, for instance composite leading indicators (CLI).

16. Four main types of leading indicators produced by NSOs or central banks can be identified from the survey:

(a) indicators reflecting general economic activity in advance;

(b) indicators monitoring business conditions that may reflect the possibilities for future economic growth;

(c) indicators based on variables that may predict future economic activity, such as investment or job vacancies; and

(d) indicators providing early signs of changes in wellbeing.

17. Several NSOs produce leading indicators aimed at reflecting general economic activity or turning points in advance. For instance, Colombia reports that it is currently designing an Indicator of Monthly Activity in the Economy (IMAE) which will be released in July 2014. The goal is to estimate the economic behaviour of the country in advance of and in line with the quarterly national accounts.

18. Portugal compiles an Economic Activity Indicator for anticipating changes in the economic cycle and using a wide range of information on industrial production, fuel and electricity consumption, employment and unemployment and car sales.

19. France produces a Turning Point Indicator which attempts to anticipate, as early as possible, upcoming changes in the economic development. This qualitative indicator is not observed directly. It is presented in the form of a curve which plots, for each date, the difference between the probability of the economic trend being positive and the probability of it being negative.

20. The Bank of Israel releases two monthly leading indicators: 1) a Markov Switching turning point index Model (MSM) on the manufacturing stocks index; 2) a Composite Leading Indicator (CLI) according to the OECD methodology for early signals of turning points in economic activity. The Bank currently works towards changing the reference series of these two leading indicators to monthly GDP instead of industrial production.

21. Mexico (INEGI) and Australia also mention producing a Composite Leading Indicator (CLI) for anticipating the direction and turning points of economic development. In Switzerland, the Business Cycle Research Institute, Konjunkturforschungsstelle (KOF) releases a similar Leading Indicator for the Business Sector. Kazakhstan produces a CLI of Industry to allow anticipating the development and possible changes in business activity a few months ahead. Poland is currently carrying out methodological work to develop a CLI, and in the Slovak Republic the Research Institute of the NSO (Infostat) has compiled an experimental CLI for 2008–2012. Canada reports having discontinued the production of the CLI in May 2012.

22. A number of NSOs carry out surveys to monitor business conditions which may provide indications of future development. Japan releases, among others, "Indices of Business Conditions" that enables anticipating the volume and development of business activities. In Canada, business conditions are measured by the Bank of Canada.

23. Similar data are provided by Surveys of Business Activity of Enterprises e.g. in Belarus, Russian Federation and Ukraine. The NSO of Ukraine conducts a quarterly survey of the chiefs of enterprises in industry, construction, retail trade, transport, agriculture and services. The Russian Federation has a similar survey as well as a survey of Investment Activity and Financial Leasing. The surveys provide data e.g. on business confidence, output, demand, new orders, stocks of finished products, prices, persons employed, investment and economic conditions.

24. Some NSOs produce indicators using variables that may predict future economic activity, such as investment or job vacancies. Investment indicators were mentioned by Belarus, Netherlands, Norway, Portugal, Russian Federation and Ukraine. The Investment Indicator of Portugal combines data on investment in machinery and equipment, transport material and construction. The Netherlands mentioned the vacancy indicator as a quick indication of the direction in which the private sector is moving in terms of new job creation.

25. Some NSOs compile indicators that may provide early signs of changes in wellbeing. Like most EU countries, Germany, Latvia and Lithuania produce annually an indicator called "At-Risk-of-Poverty" rate, and they also release an indicator called "At-Risk-of-Poverty -or-social-Exclusion rate" The latter could also be classified as a composite indicator.

B. Composite indicators

26. Many of the traditional statistics produced by statistical offices are, in fact, composite indicators as they have been formed by combining or aggregating a number of components that may have been measured using different methods or units. These statistics include for instance GDP, price indices, industrial production index etc. This section does not focus, however, on these traditional indices, but rather on those composite indicators that require valuing and weighing together very different issues that are not always quantitative or not easy to measure.

27. In addition to the composite indicators with leading abilities described above, NSOs report producing composite indicators to reflect the current state of the economy or more specific issues such as consumption, exports, regional development and human development.

28. For instance, Statistics Denmark and Statistics Netherlands released a "Business Cycle Tracer"[2] which provides a graphical method for presenting the aggregate economic state of the country. In Denmark, the composite indicator is based on the tendency surveys of manufacturing, construction, services and retail trade, and in the Netherlands on a set of 15 monthly indicators describing the business cycle. Both countries have also carried out research on producing a "Monthly Indicator of Economic Growth" by putting together the available statistics on the supply and output side and using econometric techniques where data are lacking. Statistics Norway also reports producing a business cycle barometer.

29. The Bank of Israel compiles a monthly "Composite State of the Economy Index" which estimates changes in the output of the business sector based on nine sub-components. Mexico (INEGI) regularly maintains a "System of Composite Indicators and a System of Cyclical Indicators" that also include a leading component.

30. Statistics Netherlands releases an "Exports Radar"[3] based on a set of 6 indicators of exports of goods, a "Household Consumption Radar"[4] using a set of 6 indicators of household consumption and an "Investment Radar"[5] using a set of 6 indicators of private sector investment. These radars combine statistics with data on opinions derived from confidence surveys.

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[2] Denmark, The Business Cycle Tracer: www.dst.dk/en/Statistik/emner/konjunkturbarometre/konjunkturcyklus.aspx#
The Netherlands, The Business Cycle Tracer: www.cbs.nl/en-GB/menu/themas/dossiers/conjunctuur/publicaties/conjunctuurbericht/inhoud/conjunctuurklok/conjunctuurklok2.htm

[3] The Netherlands, Exports Radar: www.cbs.nl/en-GB/menu/themas/dossiers/globalisering/cijfers/extra/exportradar.htm

[4] The Netherlands, Household Consumption Radar: www.cbs.nl/en-GB/menu/themas/dossiers/conjunctuur/cijfers/kerncijfers/consumptieradar.htm

[5] The Netherlands, Investment Radar: www.cbs.nl/en-GB/menu/themas/dossiers/conjunctuur/cijfers/kerncijfers/investeringsradar.htm

31. Statistics Estonia has produced a "Local Government Viability Index" in 2004 and 2013. It is calculated based on eight components containing demographic and economic indicators on regional development.

32. Portugal compiles a "Private Consumption Indicator" – divided into durable and non-durable consumption. This indicator combines information on retail trade turnover, electricity and fuel consumption and car sales etc.

33. In Switzerland, the Business Cycle Research Institute, KOF, produces an Index of Globalization for 208 countries based on different indicators reflecting the dimensions of globalisation: economic, social, and political.

34. Moldova and Mongolia produce a Human Development Index for the country in collaboration with UNDP.

C. Sentiment indicators

35. In the survey, 18 out of 38 statistical offices reported producing some sentiment indicators. Many NSOs produce consumer and business confidence indicators in line with the Joint Harmonised EU Programme of Business and Consumer Surveys (BCS). This area is, therefore, well harmonised. The surveys cover five economic sectors (manufacturing industry, services, retail trade, building and consumers) in all EU Member States and the candidate countries. The sum of these five sectors forms the "Economic Sentiment Indicator". In addition, a purchasing manager index (PMI) is available for the Euro area and for some European countries.

36. Subjective indicators are also produced commonly by EU countries as part of the European Union Statistics on Income and Living Conditions (EU-SILC). Austria, for instance, mentions indicators of overall life satisfaction, subjective status of health, subjective quality of societal organisation, subjective natural and living environment and subjective physical insecurity indicators. The 2013 EU-SILC module focused on wellbeing measuring issues such as life satisfaction and satisfaction with financial situation, accommodation, job, commuting and time use, trust etc. EU-SILC also measures issues relating to expectations, such as plans to change job, quality of life and satisfaction with material, health and environmental conditions, etc.

37. In some countries confidence indicators are produced by the central bank or by private companies etc. In Sweden, for example, the National Institute of Economic Research, which belongs to the system of official statistics, produces the Economic Tendency Indicator, Confidence Indicators for a number of sectors and the Consumer Confidence Indicator. In Switzerland, sentiment indicators are produced by the Business Cycle Research Institute (KOF).

38. The Australian Bureau of Statistics produced a Business Expectations Indicator for a short while but there were other indicators, produced outside official statistics, which filled the information need. Georgia (Geostat) also used to produce Producer Confidence Index for Industry.

39. Statistics Sweden produces, as a commissioned service, an Export Manager Index focusing on the business cycle at the export markets, Regional Business Tendency Surveys which is similar to national Business Tendency survey and it also compiles a Care Tendency Survey.

IV. Overview of international statistical activities

A. International organisations

1. European Commission and Eurostat

40. In the European Union a key development has been the GDP and Beyond communication of the European Commission in 2009 that presents a road map designed to "support the Commission's aim to develop indicators relevant to the challenges of today" with five key actions:

(a) Complementing GDP with environmental and social indicators

(b) Near real-time information for decision-making

(c) More accurate reporting on distribution and inequalities

(d) Developing a European Sustainable Development Scoreboard

(e) Extending National Accounts to environmental and social issues

41. These actions are linked with leading, composite and sentiment indicators. Different enlarged GDP indicators could be produced, such as the National Welfare Index (NWI) which is a composite indicator that adjusts GDP for a number of welfare services and losses. Near real-time information in the above list could refer to leading and sentiment indicators.

42. The scoreboard approach, on the other hand, can be seen as an alternative or complementary to compiling composite indicators. Eurostat has carried out some feasibility studies of new types of indicators, for instance on the feasibility of wellbeing indicators, which suggests using the scoreboard approach for measuring the different drivers of wellbeing and developing a composite outcome indicator on Satisfied Adjusted Life Expectancy.

Leading indicators

43. Eurostat produces a Business Cycle Clock to give the possibility of investigating cyclical behaviour of different variables and to compare them in order to identify some leading behaviours. Furthermore, Eurostat is working with partners aiming to compile a handbook on cyclical composite indicators. The EU regulation (EC) No 1165/98 for short-term statistics requires the production of monthly and quarterly statistics that are not actually leading indicators, but provides some statistical variables which may or may not have some leading properties. For example, building permits may sometimes be used as a leading indicator of economic activity. The industrial new orders variable that used to belong to the EU requirements was also intended to serve as a leading indicator of future production. However, the predictive capacity of the variable was considered limited, and the European Statistical System Committee agreed that the requirement to produce that variable should be removed. Some EU countries, however, have decided to continue producing the indicator, and the European Central Bank (ECB) makes use of the data.

Composite indicators

44. The European Commission compiles some composite indicators for policy monitoring. For example a "European Innovation Scoreboard" (EIS) and a "Summary Innovation Index" (SII) were developed in 2000 to evaluate and compare the innovation performance of the EU Member States. The SII combines 20 indicators of four dimensions: human resources for innovation, creation of new knowledge, transmission and application

of knowledge and innovation finance, output and markets. Furthermore, an "Internal Market Scoreboard" and an "Internal Market Index" are produced as a weighted sum of 12 base indicators to monitor that the internal market works in practice.

45. The use of composite indicators to assess progress towards the knowledge-based economy is an emerging field at the Commission. Two composite indicators have been developed: 1) one aggregating the various forms of investment in the knowledge-based economy; and 2) the other aggregating measures of performance in the knowledge-based economy. These were developed with the involvement of Eurostat and the Joint Research Centre, and with assistance of researchers. Furthermore, the European Commission has monitored since 2004 the e-business environment in the EU with the annual E-Business Readiness Index.

46. The Joint Research Centre of the European Commission carried out an inventory of risk-related or resilience-related composite indicators and ratings[6] in 2012. It lists 44 indicators with descriptions provided by their authors. Furthermore, the European Commission produces a business climate indicator. Eurostat actively collaborates with the United Nations Statistics Division (UNSD) in this area, namely by coordinating the drafting of the handbook on cyclical composite indicators jointly with the Conference Board.

Sentiment indicators

47. The "Economic Sentiment Indicator" (ESI) is based on monthly sentiment surveys held among businesses and consumers in the EU Member States in line with the Joint Harmonised EU Programme of Business and Consumer Confidence Surveys. It is an average weighted value of confidence indicators in manufacturing, construction, retail trade, services and consumer confidence. In addition, ESI is also calculated for financial services at the EU and Euro Area level. The business surveys are compiled from a subset of questions relating to business managers assessment of recent developments in their business, the current level of stocks, and expectations about a number of economic variables. The consumer survey is twofold: first, it collects information on households' spending and savings intentions, and second, it assesses their perception of the factors influencing these decisions. Eurostat has also organised workshops in this area of work, e.g. a joint EU/OECD Workshop on recent developments in Business and Consumer Surveys that was held on 14-15 November 2013 in Brussels.

48. Eurochambres also conducts a Eurochambres Economic Survey as the source of sentiment indicators on business expectations in Europe. Eurochambres brings national reports and regional data together to prepare a European report on the main trends.

2. European Central Bank

Leading indicators

49. The European Central Bank (ECB) publishes an indicator on Euro Area Industrial New Orders as a leading indicator for euro area industrial production and for cross-checking developments in industrial production in more real-time. The index is published at a delay of approximately 55 days to fill the gap after the requirement to collect data on new orders was removed from an EU regulation. ECB makes use of the large number time series of euro area countries who continued to compile the indicator nationally. For those countries which discontinued the collection of national data, ECB uses model-estimates in calculating the indicator on euro area industrial new orders. New orders are modelled

[6] http://publications.jrc.ec.europa.eu/repository/bitstream/111111111/27384/1/lbna25560enn.pdf

across EU countries using business opinion surveys and industrial turnover in addition to applying a common modelling framework.

50. ECB has also done studies on early warning indicators to identify data and develop methods that would be useful for economic and monetary policies for their leading abilities. One of these studies has shown, for instance, that global indicators including, global GDP, global credit and commodity prices, are the most significant sources of evaluating risks for economies; and housing prices seems to be the most important domestic early warning indicator.

Composite indicators

51. The recent financial and economic crisis revealed gaps in the information basis for analysing, monitoring and controlling systemic risks in the financial system. ECB has, therefore, developed new indicators to fill data gaps. For instance, the Composite Indicator of Systemic Stress (CISS) measures the current state of instability, i.e. the current level of frictions, stresses and strains in the financial system and condenses that state of financial instability into a single statistic. Another example of a composite indicator produced by ECB would be the Financial Market Liquidity Indicator which is part of the ECB's Risk Dashboard Data.

3. International Monetary Fund

Leading indicators

52. An example of a leading indicator, produced by the International Monetary Fund (IMF) is the information on net drains on foreign currency assets up to one year ahead derived from a template on international reserves and foreign currency liquidity. In addition, the quarterly external debt database, maintained jointly with the World Bank, provides information on debt service payment schedule. Also the data on balance sheets of financial institutions, government, and international investment position provide forward looking indicators of potential vulnerabilities arising from counterparty exposures.

Composite indicators

53. From the IMF perspective, leading and composite high frequency indicators are very important for effective surveillance and evidence-based policy making by member countries. The International Monetary Fund (IMF) has developed new indicators and scoreboards to respond to the need for better tools to assess the strengths and vulnerabilities of the financial system. For example the Financial Soundness Indicators and the related Compilation Guide have helped several countries studying the possibility to produce an aggregate financial soundness index.

54. IMF is considering launching work to develop and promote the compilation of high frequency indicators in areas of macroeconomic and financial statistics. IMF has studied the leading abilities of indicators with regard to currency in order to develop a specific early warning system. The system involves monitoring the evolution of several indicators that tend to exhibit an unusual behaviour in the periods preceding a crisis. The variables that have the best track record within this approach include exports, deviations of the real exchange rate from trend, the ratio of broad money to gross international reserves, output and equity prices.

4. Organisation for Economic Co-operation and Development

Leading indicators

55. OECD developed a system of composite leading indicators originally in the 1970's to give early signals of turning points of economic activity. OECD releases Composite Leading Indicators (CLIs) as a subset in the Main Economic Indicators database for 33 OECD countries (Iceland is not included), 6 non-member economies and 8 regional aggregates. The OECD CLIs are calculated by combining component series in order to cover, as far as possible, the key sectors of the economy. The component series cover a wide range of short-term indicators, such as observations or opinions about economic activity, housing permits, financial and monetary data, etc. For each country, the series are selected according to the following criteria: economic significance; cyclical behaviour; and data quality. The OECD system of composite leading indicators is based on the "growth cycle" approach, which measures deviations from the long-term trend. CLIs are designed to provide information on short-term economic movements, especially on turning points.

Composite indicators

56. The Handbook on Constructing Composite Indicators, released in 2008, aims to provide methodological guidance on constructing composite indicators. It was produced jointly by the Organisation for Economic Co-operation and Development (OECD) and the Joint Research Centre (JRC) of the European Commission in Ispra, Italy. The handbook is concerned with those indicators which compare and rank country performance in areas such as industrial competitiveness, sustainable development, globalization and innovation.

57. The Programme for International Student Assessment (PISA) ranks about 70 countries based on an international survey which ranks education systems worldwide by testing the skills and knowledge of 15-year-old students. More than 510,000 students took part in the latest PISA survey, representing about 28 million 15-year-olds globally. The resulting composite indicators evaluate countries in terms of students' scores in mathematics, reading and science.

Sentiment indicators

58. The OECD Consumer Confidence Indicators (CCIs) are based on consumer opinion survey data compiled initially by national statistical institutes, other government agencies, private research institutes, banks, and other research institutes. The consumer opinion survey indicators cover a set of indicators on consumer confidence, expected economic situation and price expectations. OECD standardises the indicators to ensure equal smoothness and the same amplitude of cyclical movements. Consumer Confidence Indicators are not particularly successful in signalling turning points in production; however they capture cyclical patterns in household consumption behaviour fairly well.

59. The OECD Business Confidence Indicators (BCIs) cover a standard set of indicators for four economic sectors: manufacturing, construction, retail trade and other services. For these indicators, OECD uses and standardises the following data from countries: industrial confidence indicator, business confidence indicators, business situation or business sentiment indicators. BCIs tend to have shorter but more stable lead times then the CLIs, and they are subject to little or almost no revision. For all EU Member countries, the series selected are included in the harmonised system of business and consumer tendency surveys managed by the European Commission and are comparable across these countries.

5. United Nations Economic Commission for Europe

60. The Active Ageing Index (AAI), developed by UNECE, is a new composite index covering 28 countries (EU countries and United States). It aims to help policy makers in developing policies for active and healthy ageing. Its purpose is to point to the untapped potential of older people for more active participation in employment, in social life and for independent living. Mobilising the potential of both older women and men is crucial to ensure prosperity for all generations in ageing societies. The indicators are being enlarged to new countries at the moment.

6. United Nations Statistics Division

Leading indicators

61. The United Nations Statistics Division's (UNSD) programme of work has included a number of activities on developing rapid estimates, business cycle indicators and tendency surveys. UNSD organised two seminars on the topic jointly with Eurostat in 2009. The first seminar on Timeliness, Methodology, and Comparability of Rapid Estimates of Economic Trends was held in May 2009 in Ottawa, hosted by Statistics Canada. The second seminar on Early Warning and Business Cycle Indicators, was held in December 2009 in Scheveningen, and was hosted by Statistics Netherlands. The third Seminar on Early Warning and Business Cycle Indicators was held in November 2010 in Moscow, in collaboration with Eurostat and Statistics Netherlands and was hosted by the Federal State Statistics Service of the Russian Federation (Rosstat). The seminars discussed a range of early warning and business cycle indicators, and provided an initial assessment of the challenges and possible strategies for international work in the area.

62. In 2014-2015, UNSD plans to publish three Handbooks on Business Cycle Composite Indicators and on Rapid Estimates (the latter does not directly belong to the scope of this review). The Handbooks aim to provide best practices and harmonized principles on the compilation of these indicators. Thus, they may provide an update to the European Commission and OECD Handbook on Business Tendency Surveys. Eurostat and the Conference Board coordinate the drafting of the handbook on business cycle composite indicators, and Italy the drafting of the handbook on opinion surveys.

Composite indicators

63. In 2012, the UN Statistical Commission endorsed the System of Environmental and Economic Accounting Central Framework (SEEA-CF). It is a satellite account of the System of National Accounts (SNA) and includes a number of composite indicators based on macro-economic aggregates corrected for the depletion of resources, e.g. Depletion Adjusted Net Value Added. While these corrections are limited to only some of the domains of sustainable development, they imply that official statistics are taking on the challenge of complementing traditional economic statistics with new indicators.

64. The United Nations Department of Economic and Social Affairs compiles an Index of Knowledge Societies (IKS) that aims at capturing 45 countries' achievement in the conditions for the development of a Knowledge Society. Such conditions are grouped into three main dimensions: assets, advancement and foresightedness, each of which is measured by a number of underlying indicators.

Sentiment indicators

65. UNSD is drafting in international collaboration a Handbook on Economic Tendency surveys. The first draft Handbook is almost finished, but there were difficulties due to different experience and methodological approaches of countries and due to the need to

harmonise the approach used for tendency surveys with other statistics. The issue will be discussed at the UN Statistical Commission in February 2014.

7. United Nations Development Programme

66. The United Nations Development Programme (UNDP) published a stocktaking report of composite indicators that rank or assess countries according to some economic, political, social or environmental measure which was updated in 2008[7]. The report includes 178 different composite indicators and their brief descriptions. Most of those indicators that are also regularly updated and relevant for the CES countries are included in this review.

67. One of the best known composite indicators is the "Human Development Index" (HDI), which is published annually since 1990 by the UNDP for 177 countries. The first Human Development Report introduced a new way of measuring development by combining indicators of life expectancy, educational attainment and income into a composite indicator. The index measures countries' development as a weighted average of indicators covering economy, education and health.

68. UNDP has developed a composite index on the "Achievement of the Millennium Development Goals" (MDGs) with the World Bank to assess the prospects of low and middle income countries for reaching six of the MDG targets. The countries are classified to four groups describing their likelihood to achieve the goals: likely, possible, unlikely and very unlikely.

69. Gender-related Development Index (GDI), created in 1995, covers 177 countries for which it adjusts the average achievement to reflect the inequalities between men and women in the following: 1) a long and healthy life; 2) knowledge; 3) a decent standard of living.

70. The Gender Empowerment Measure examines whether women and men are able to actively participate in economic and political life and take part in decision-making in 177 countries. It captures gender inequality in: 1) political participation and decision-making; 2) economic participation and decision-making; and 3) power over economic resources.

71. The Human Poverty Index is compiled for two groups of countries: for developing countries and for selected OECD countries. For the first group it measures three dimensions of deprivation: 1) a long and healthy life; 2) knowledge; and 3) a decent standard of living. For selected OECD countries, a fourth dimensions of deprivation, social exclusion, is also measured. The index covers 177 countries, and is produced annually since 1997.

72. The Technology Achievement Index (TAI), introduced in the 2001 Human Development Report, aims to capture how well a country is creating and diffusing technology and building human skills. The index focuses on: 1) creation of technology; 2) diffusion of recent innovations; 3) diffusion of old innovations; and 4) human skills. The index offers rankings for 72 countries for which data were available.

8. United Nations Conference on Trade and Development

73. The United Nations Conference on Trade and Development (UNCTAD) created a Trade and Development Index (TDI) in 2005 to assess the level of trade and development in 110 countries. It measures three dimensions comprising 11 components and 29 indicators: 1) structural and institutional; 2) trade policies and processes; and 3) level of development.

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[7] A stocktaking of composite indicators:
web.undp.org/developmentstudies/docs/indices_2008_bandura.pdf

9. United Nations Educational, Scientific and Cultural Organization

74. The United Nations Educational, Scientific and Cultural Organization (UNESCO) created in 2002 the Education for all Development Index (EDI) to measure the overall progress towards the goal of education for all (EFA). The index captures four goals of the six so called "Dakar main education goals": 1) universal primary education; 2) adult literacy; 3) quality of education; and 4) gender.

75. Furthermore, the gender aspects of education are presented as a separate index – called the Gender-related EFA Index (GEI). The index aims to capture the country's relative achievement in gender parity in participation in primary and secondary education and in adult literacy.

10. United Nations Environment Programme

76. The United Nations Environment Programme (UNEP) collects and releases a number of environmental indicators and collaborates with UNSD to fill data gaps. In the Inclusive Wealth Report 2012 UNEP, jointly with the UN University's International Human Dimensions Programme (UNU-IHDP), presents an index that measures the wealth of nations by a comprehensive analysis of a country's capital assets (manufactured, human and natural) combined into a composite indicator – the Inclusive Wealth Index (IWI). The report suggests that this index be used as a complement to GDP and the Human Development Index (HDI).

77. Another UNEP report, titled Measuring Progress Towards an Inclusive Green Economy, released in 2012, suggests indicators to measure progress towards green economy. The report suggests supplementing GDP with indicators that take into account the value of a country's environmental goods and services, such as forests, air or water resources, as well as human wellbeing and quality of life. The report includes some indicators, such as carbon emissions, carbon price, renewable energy share of the energy mix and investment in "green" research and development that could be used as leading indicators for climate change. The report also suggests valuing natural resource stocks and ecosystem services and measuring the literacy rate of population.

78. UNEP is actively involved in indicator development in various areas related to environment, and notes that there is an urgent need to bring all these efforts in line with each other. Concrete examples of composite indicators by UNEP include the Water Footprint Indicator, the Disaster Risk Index and the National Biodiversity Index. A country's Water Footprint is the total volume of freshwater used to produce the goods and services consumed by its population. The National Biodiversity Index, created in 2001 for 195 countries, uses quantitative data to measure aspects of biodiversity, ecosystem condition, services, and drivers of change to help analyse how biodiversity is changing over time and space, why it is changing, and what the consequences of the changes are for ecosystems, their services, and human well-being. The Disaster Risk Index monitors the evolution of risk by assessing which countries are most at risk considering various types of hazards, such as droughts, floods, cyclones and earthquakes.

79. The Climate Competitiveness Index is a new analysis of how countries create enduring economic value through low carbon technology, products and services. It includes 13 variables examining the degree to which 95 countries have the leadership, institutions, systems and practices in place for climate competitiveness.

11. United Nations Public Administration Network

80. United Nations Public Administration Network (UNPAN) created in 2003 the E-Government Readiness Index which is a composite measure of the capacity and willingness of countries to use e-government. It ranks government's efforts while taking into account

their size, infrastructure availability and penetration of information and communication technologies and the level of education and skill development. The index assesses 50,000 features for 191 countries. UNPAN also compiles an E-Participation Index to assess the willingness of countries to engage citizens in public policy making through the use of the e-government programs. Other ICT related indices also exist.

12. World Bank

81. Since 2005 World Bank has produced a Total Wealth and Genuine Savings Index which is a new estimate of total wealth, including produced capital, natural resources, and the value of human skills and capabilities. The index provides a ranking of 118 countries showing that many of the poorest countries in the world are not on a sustainable path. Another composite indicator produced by the World Bank is the Adjusted Net Saving (ANS) that builds on gross national savings but adjusts it for developments in natural, economic and social assets.

82. The World Bank's International Development Association (IDA) compiles the Country Policy and Institutional Assessment (CPIA) index for allocating their resources for 81 countries. This index assesses the quality of countries' policies and institutions, to arrive at an equitable distribution of IDA's funds among countries. The index assesses policy and institutional frameworks for fostering poverty reduction, sustainable growth and the effective use of development assistance.

83. The World Bank Institute compiles, since 1996, Governance Indicators for 199 countries that determine how authority is exercised in the country for the common good, encompassing: 1) the process of selecting, monitoring, and replacing governments; 2) the capacity to formulate and implement sound policies and deliver public services; and 3) the respect of citizens and the state for institutions.

84. The "Ease of Doing Business", developed in 2004, is a simple average of the country's ranking in 7 areas of business regulation and property rights protection in 145 countries: 1) starting a business; 2) hiring and firing workers; 3) registering property; 4) getting credit; 5) protecting investors; 6) enforcing contracts; and 7) closing a business. It measures government regulations and their effect especially on small and medium sized domestic firms. The data are based on research of laws and regulations with input and verification from 3,000 local government officials, lawyers, business consultants and other professionals.

13. World Economic Forum

85. The Global Competitiveness Report 2013-2014 assesses the competitiveness of 148 economies, providing insight into the drivers of their productivity and prosperity. The Global Competitiveness Index (GCI), created in 1999, ranks 104 countries using statistical data such as enrolment rates, government debt, budget deficit, and life expectancy, obtained from internationally recognized agencies, notably the World Bank, IMF, UNESCO, and WHO. Furthermore, the GCI uses data from the World Economic Forum's annual Executive Opinion Survey to capture issues that require a qualitative assessment or for which internationally comparable statistical data are not available. The Global Competitiveness Index is a weighted average of three sub-indices: basic requirements, efficiency enhancers and innovation factors.

86. The Gender Gap indicator, developed in 2005, measures the extent to which women have achieved full equality with men in 58 countries in five areas: 1) economic participation; 2) economic opportunity; 3) political empowerment; 4) educational attainment; and 5) health and wellbeing. The indicator makes use of the World

Development Indicators of the World Bank, and the Human Development Report of UNDP, as well as the annual Executive Opinion Survey of the World Economic Forum.

87. The Innovation Capacity Index was also produced under the auspices of the World Economic Forum in 2001-2002 for 75 countries. It measures country's innovation capacity as a composite indicator of: 1) the proportion of scientists and engineers; 2) innovation policy; 3) cluster innovation environment; and 4) linkages.

88. The Networked Readiness Index measures the degree of preparation of a nation or community to participate in and benefit from ICT developments. 104 countries are ranked from highest to lowest readiness annually and the index exists from 2001.

14. World Health Organisation

89. "Overall Health System Achievement Index and Overall Health System Performance Index" were developed by World Health Organization (WHO) in 2000 covering 191 countries. The first composite indicator measures achievement in the level of health, distribution of health, level of responsiveness, distribution of responsiveness and fairness of financial contribution based on a survey of one thousand public health practitioners. The second index of performance reports how efficiently health systems translate expenditure into health.

90. The Global Burden of Disease indicator of WHO measures burden of disease using the disability-adjusted life year method. It was developed in 1990 to assess the burden of disease consistently across diseases, risk factors and regions.

B. International indicators developed by NGOs, academia and private companies

91. Several environmental indicators such as the Environmental Degradation Index (EDI), Environmental Sustainability Index (ESI) and Environmental Vulnerability Index (EVI) are produced by academics and research institutes.

92. The World Wildlife Fund developed one of the most influential indicators in 2000, namely the Ecological Footprint to measure the consumption of renewable natural resources in 148 countries. Ecological Footprint is the total area of productive land or sea required to produce all the crops, meat, seafood, wood and fibre the population consumes, to sustain its energy consumption and to give space for its infrastructure.

93. Germanwatch and Climate Action Europe produce a Climate Change Performance Index (CCPI) for 58 countries to combine the per-capita emission trend, absolute energy-related CO_2 emissions and climate policies into one indicator. The Climate Change Vulnerability Index (CCVI) by Maplecroft evaluates 42 social, economic and environmental factors to assess national vulnerabilities. Another climate composite indicator is the Global Climate Change Policy Tracker of the Deutsche Bank which provides investors with an analysis of climate change policies and assigns a risk rating to 109 countries, states and regions.

94. Other examples of environmental composite indicators include the Happy Planet Index (HPI), the Sustainable Society Index (SSI) of the Nederlandduurzaam, the Living Planet Index (LPI) of the World Wide Fund (WWF) and the Sustainability Index of the Zurich Cantonal Bank (ZKB). The *Happy Planet Index* (HPI), developed by the Friends of the Earth in 2006, measures the ecological efficiency with which wellbeing is delivered in 178 countries. It is the first index to combine environmental impact with wellbeing to measure the environmental efficiency.

95. One of the most well-known economic indicators is the Economist's Big Mac Index covering 120 countries. The index is based on the Purchasing Power Parities (PPP) and aims to foresee if the currency of a country is at the right level using as a basket the Big Mac hamburger. If the actual exchange rate is higher than the Big Mac PPP, the index considers that the currency is undervalued.

96. Several composite indicators measure economic risks and vulnerabilities. For example, the Ducroire/Delcredere Country Risks classifies 239 countries into three categories according to the intensity of commercial risk. Other related indicators include the Economic Vulnerability Index, Institutional Investor Country Credit ratings, International Country Risk Guide Rating and the Grey Area Dynamics. These identify key emerging sources of risks to business.

97. The Business Environment Risk Intelligence (BERI) provides many composite indicators to monitor business environment: Lender's Risk Rating (50 countries), Financial Ethics Index (115 countries), Quality of Workforce Index (42 countries) and a Composite Score of Risk (50 countries). Business environment can also be monitored in 161 countries with the Index of Economic Freedom which brings together 50 economic variables to assess government coercion or constrains and is produced jointly by Heritage Foundation and Wall Street Journal.

98. Concerning economic conditions of countries, the Forbes' Tax Misery and Reform Index analyses the top marginal rates of taxation of and payments on corporate income, personal income, wealth, employer social security and sales. The Fraser Institute compiles an Economic Freedom of the Word Index to measure how supportive policies are of economic freedom in personal choice, voluntary exchange, freedom to compete, and security of privately owned property in 123 countries. The Milken Institute compiles the Capital Access Index (CAI) which scores the ability of entrepreneurs to gain access to financial capital in 85 countries.

99. Globalization Indicators are compiled by World Markets Research Centre for 185 countries in the form of an assessment of economic interdependence and connectivity and by Foreign Policy with AT Kearney for 62 countries to measure four dimensions: political, technological, personal and economic. The Global Retail Development Index of AT Kearney ranks the attractiveness of 30 top emerging countries for retail business. AT Kearney also produces a Foreign Direct Investment Confidence Index with the Global Business Policy Council to gauge the likelihood of investment in specific markets in order to gain insight into likely trends in future global FDI flows in 42 countries.

100. Economist Intelligence Unit (EIU) compiles many composite indicators, such as the World Wide Cost of Living Index in 130 cities of 90 countries, Country Risk Ratings for 100 developing and highly indebted countries and Business Environment Rankings measuring the quality and attractiveness of the business environment for 60 countries. It also produces a Country Risk Rating to assess the foreign direct investment (FDI) climate for 202 countries based on six dimensions (political, economic, legal, tax, operational and security). The Political Instability Index shows the level of threat posed to governments by social protest, and the E-Readiness Ranking the extent to which a country's business environment is conducive to Internet-based commercial opportunities.

101. The International Institute for Management Development produces an aggregated World Competitiveness Scoreboard, since 1989, to rate 60 countries based on their performance in the economy, government, businesses and infrastructure.

102. Gallup's World Poll sentiment indicators span more than 150 countries annually measuring what the world's adult population thinks about topics from basic needs to job creation. Gallup typically surveys 1,000 adults in each country once a year, using a standard

set of questions translated into the major languages of the respective country. The survey covers topics such as macroeconomics; personal security related to law and order; having enough money to provide food and shelter; infrastructure, including roads, education, environment, healthcare, and housing; jobs; wellbeing; people's attachment to their communities and opinions on the performance of the country's leaders.

103. Various governance indicators are produce to rank governments' performance. Transparency International compiles the Corruption Perception Index to rank countries in terms of experts' perception of corruption for 145 countries. It is a composite index based on surveys of business people and assessments by country analysts. Similarly, the Global Integrity Index of the Center for Public Integrity assesses anti-corruption mechanisms in 41 countries. Other governance indicators include Failed States Index, Index of State Weakness, Least Secure Countries, Open Budget Index and the Commitment to Development Index.

104. A Press Freedom Index was developed by Freedom House in 1980 to annually assess the degree to which 192 countries permit the free flow of information. Similarly, the International Research and Exchanges Board provides a Media Sustainability Index for an analysis of the conditions for independent media in 20 countries across Europe and Eurasia. Freedom House also compiles a number of composite indicators on governance issues, such as "Countries at the Crossroads" (to evaluate the performance of 70 governments in: accountability and public voice; civil liberties; rule of law; and anticorruption and transparency); "Democracy Score" (to assess 27 countries on how democratic or authoritarian the countries are) and "Political Rights and Civil Liberties Rating" (to measure freedom in 192 countries according to two categories: political rights and civil liberties).

105. Many indicators dealing with social issues are not produced regularly due to the lack of existing data and the burdensome data collection and analysis processes. However, the Social Watch produces annually a Basic Capabilities Index (BCI) which was originally developed in 2004 as Quality of Life Index. It covers 94 countries and focuses on child health, under-5 mortality and the percentage of births attended by skilled health personnel. Social Watch also compiles a Gender Equity Index (GEI), created in 2004, to rank 134 countries according to their performance in the dimensions relating to gender equity.

106. Another quality of life indicator is produced by Mercer Human Resource Consulting to analyse the difference in the Global Quality of Living between cities using data on consumer goods, economic environment, housing, medical and health considerations, natural environment, political and social environment, public services and transport, recreation, schools and education, socio-cultural environment. The Food Security Risk Index released by Maplecroft is specialised in evaluating risks to the supply of basic food for 163 countries.

107. Save the Children compiles "the Mothers' Index" to assess women's and children's well-being. The index relies on published information on: 1) risk of maternal mortality; 2) women using modern contraception; 3) births attended by trained personnel; 4) pregnant women with anemia; 5) adult female literacy rate; 6) participation of women in national government.

108. Ruut Veenhoven has carried out surveys since 1984 to form a "Happiness Index" that provides rankings of average happiness, happy life years, equality of happiness and inequality adjusted happiness. The surveys cover 90 countries.

109. A group of researchers (from the Universities of Geneva (UNIGE) and Fribourg (UNIFR), the Observatoire de la Finance of Switzerland and some international organizations) is planning to conduct a project on composite indices used for country rankings. The idea of the project is to analyse these indices regarding their structure and

data used, link to the corresponding theoretical concepts as well as the behaviour of the indices.

V. Issues and challenges

A. How should national statistical offices react?

110. This section is also based on the small UNECE survey. One question of the survey explored views on how the national statistical offices should react to the challenge with regard to the leading, composite and sentiment indicators.

111. In the replies, statistical offices emphasized the need to constantly monitor the development of users' interests in these indicators, and to be supportive of the information needs by providing the data available at the NSOs.

112. Some statistical offices suggested organising regular meetings with key data users or conducting tailored user surveys to explore information needs especially for support needed for environmental, fiscal and monetary policies in the form of accurate and timely data. A few NSOs prefer promoting the use of scoreboards of indicators instead of compiling composite indicators.

113. Countries suggested that development work be carried out at international level with NSOs' involvement to reduce costs and increase benefits of learning from each other. NSOs should review the results of international work and share good practices. This would entail exploring the different methodologies used, learning from best practices and if required, requesting for support for the development work. An NSO mentioned that there are about 450 indicators on environmental issues only. International cooperation would be needed to identify the key indicators for NSO involvement.

114. In general, producers of official statistics should be open to the need for leading, composite and sentiment indicators, at least by collaborating with researchers and other agencies compiling them. Some NSOs raise the question whether statistical offices should be at all involved in producing indicators that are based on econometric modelling. On the other hand, nowcasting was mentioned as one such method, which is a common practice in many statistical offices.

115. The prerequisite for NSOs could be that they will engage only in the compilation of reliable figures. There should be an internationally agreed framework and indicators before NSOs get actively involved. Finland mentions that development of internationally agreed indicators and frameworks, for instance on wellbeing and sustainable development should be continued. NSO's role would then be clearer - to contribute by providing the information needed for the agreed frameworks.

116. Some NSOs also suggest that the statistical community should provide statistical expertise to the development and reporting of leading, composite and sentiment indicators even when they are produced outside the national statistical system. They note that NSOs could contribute to improving the reliability and usefulness of these indicators for policy making, for instance, to ensure that proper metadata is available and that the methodologies used are internationally agreed and improved if need be. Working collaboratively with other producers and researchers in developing these indicators further would probably also reduce costs.

117. Developing new indicators based on existing data is important for keeping costs and response burden under control. NSOs should, therefore, participate in the development of the indicators in areas where existing data sets can be used to avoid launching new data

collections. Many NSOs are also experienced in nowcasting methods, for instance for GDP, and similar methods could be useful for other indicator needs.

118. NSOs should intervene when the existing indicators are misused or misinterpreted. They could support carrying out studies and take part in debates on the proper use and correct interpretation of these statistical tools.

119. Several statistical offices reported that more resources would be needed if the NSO was to enlarge its activities to compile new leading, composite and sentiment indicators. Answering new information needs requires sufficient resources, trained staff and the necessary technical and material tools. Therefore, NSOs and the international organisations should promote these indicators and put effort into getting support from governments for the work.

120. Finally, it would be in everyone's interest if the leading, composite and sentiment indicators were compiled based on harmonized and sound methodologies by reusing statistical data that is readily available and comparable across countries.

B. Key issues to be considered

1. Leading indicators

121. Some statistical offices already produce leading indicators, whereas some are produced by central banks, research institutes or private companies. These are often economic indicators, on which statistical offices have a lot of data and knowledge. However, there may be issues with reliability of estimates and the use of econometric modelling within official statistics. On the other hand, producing leading indicators can boost the image of the statistical office as a provider of timely data. The related issues are:

- Which are the indicators where NSOs could best contribute?
- Which are the leading indicators that allow for predicting changes in the economy in a most reliable way? Is it better for NSOs to focus to nowcasting of existing indicators or to compile composite leading indicators?
- Would it be useful to develop leading indicators for social and environment statistics? These could be indicators that help anticipate changes in societal wellbeing or that monitor drivers of environmental changes. It could be useful to do a study, in collaboration with the academia, to identify a list of potential leading indicators for different statistical areas and exchange experience in this area.

2. Composite indicators

122. There are different kinds of composite indicators some of which are produced by official statistics (e.g. GDP). Weighting and aggregation of the different variables is the key concern that affects the reliability of the indicators. Selection of weights and methods to merge data measured in different units require judgement. Issues here are related to whether, where and how official statistics should be involved:

- What could be the criteria on what kind of composite indicators statistical offices could be involved in producing? When are composite indicators in line with the principles of producing official statistics?
- How to avoid misinterpretation? How should NSOs react if composite indicators are based on official statistical data but present a distorted picture of reality?
- Would it be useful for NSOs to be involved in partnerships with academia or other producers of composite indicators? What should be the goal of such collaboration?

3. Sentiment indicators

123. NSOs are increasingly getting involved in compiling subjective indicators and some NSOs compile consumer and/or business confidence indicators. The issues here mainly deal with combining the role of NSOs as a producer of objective statistics with the actual production of statistics based on sentiments, feelings and expectations:

- How to deal with the potential risk to the credibility of the statistical office?
- How useful are the current subjective indicators or sentiment indicators – Do they help anticipate future development? How to deal with their volatility? How to identify and explain the reasons for increase or decrease in sentiment indicators?
- What could be the criteria for defining what kind of sentiment indicators statistical offices could produce?

124. A crosscutting issue regarding the threats and opportunities for NSO involvement is communication. To what extend could good communication solve the potential threats related to NSO involvement in leading, composite or sentiment indicators?

VI. Conclusions and recommendations

A. Conclusions

125. NSOs are already very much involved in producing leading, composite and sentiment indicators. At international level, a number of international organisations (e.g. according to the UNDP stocktaking report) are involved in producing or developing composite indicators and the academia are carrying out various research projects to study them (the project of the Universities of Geneva and Fribourg etc.).This is potentially on area where official statistics could cooperate for the benefit of all stakeholders.

126. The following conclusions can be made from the overview of national and international statistical activities in leading, composite and sentiment indicators:

(a) These indicators create a lot of debate for instance around country rankings on specific issues such as competitiveness or wellbeing. The debate underlines the demand for this information. Policy makers are also increasingly referring to composite indicators;

(b) A considerable number of different indicators exists and new indicators emerge constantly. It is difficult for users to assess the quality and reliability of the different indicators, and NSOs have problems in deciding where to get involved;

(c) Despite some level of harmonization in the EU, this area of work is highly fractioned and the producers of similar indicators vary across countries;

(d) Official statistics are increasingly reacting to the challenge of complementing traditional statistics with new leading, composite and sentiment indicators. Users request for focused scoreboards or composite indicators that are easier to compare and analyse and can be compiled faster;

(e) It is not clear what the role of national statistical offices should be with regard to these indicators. Should NSOs take a greater role in the development and production of leading, composite and sentiment indicators on key topics? Should they be more active in providing data for these purposes or also offer their competence for improving the quality of the existing indicators? Should NSOs intervene in the use and misuse of these indicators?

B. Possible further work

127. The UNECE survey asked statistical offices whether there is a need for international work to be undertaken related to the leading, composite and sentiment indicators and official statistics. While some countries do not see this area as a priority, a number of NSOs noted that it would be important to agree on common priorities and the way forward at international level. The following options for possible ways forward were identified mainly based on the replies to the survey:

(a) Developing a quality checklist for users: Some NSOs suggest that users need guidance for assessing the quality and reliability of existing leading, composite or sentiment indicators, and a specific evaluation criterion, checklist or a quality framework would be helpful;

(b) Identifying problems of NSOs: The survey replies highlighted many problems and challenges for NSOs concerning leading, composite and sentiment indicators that should be identified and then addressed by agreeing on the way forward internationally;

(c) Defining the role of official statistics: The views of NSOs regarding their role in this area were diverse. It might be helpful to define their responsibilities and boundaries with regard to leading, composite and sentiment indicators. Selection criteria for types of indicators for NSO involvement could also be developed, including for instance high policy relevance of the indicator, availability of well-developed methodology and analytical soundness of the indicator;

(d) Defining the key indicators where NSOs could be involved: Many indicators exist currently which makes it difficult for NSOs to get involved. The key indicators in which NSOs could be involved should be defined internationally;

(e) Harmonising methodologies further: Several NSOs see a need to improve comparability and reliability of these indicators by developing practical guidance including definitions, recommendations and description of best practices even if these indicators were not produced by NSOs;

(f) Enhancing the role of official statistics: Some NSOs suggest that leading, composite and sentiment indicators should be developed based on the methodological standards of official statistics, which should be agreed upon internationally. Key indicators should be compiled under the status of official statistics.

128. Countries suggested increasing cooperation and exchange of good practices by:

- Closer cooperation among international organizations.
- Seminars and training workshops to increase understanding of this area.
- Capacity building activities for the countries with less developed statistical systems.

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Outcomes of the in-depth reviews carried out by the Conference of European Statisticians Bureau

Outcome of the in-depth review of leading, composite and sentiment indicators

Note by the Secretariat

Addendum

Summary

This note provides information on the outcome of the in-depth review of leading, composite and sentiment indicators carried out by the Bureau of the Conference of European Statisticians in January 2014.

The review explored countries' experience and summarised international statistical activities in leading, composite and sentiment indicators, and considered the role of official statistics in this connection. As a basis for the in-depth review, the Secretariat carried out a short survey on the practices of national statistical offices and received 38 replies.

The in-depth review was based on a paper by the Secretariat. The updated in-depth review paper has been submitted to the Conference as document ECE/CES/2014/10.

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I. Introduction

1. The Bureau of the Conference of European Statisticians (CES) reviews each year selected statistical areas in depth. The purpose of the reviews is to improve coordination of statistical activities in the region of the United Nations Economic Commission for Europe (UNECE), identify issues and problems, and make recommendations for possible follow-up actions. The paper focuses on strategic issues and highlights concerns of statistical offices of both a conceptual and a coordinating nature.

2. The CES Bureau selected the topic of leading, composite and sentiment indicators for review to consider the role of official statistics in relation to these indicators which are increasingly used to compare countries' performance and for policy making.

3. The review paper provides an overview of current work and challenges in this area. The paper summarises the main developments in the field composed of numerous, new initiatives. The review was based on information from the Internet, the short survey of CES member countries, and two stocktaking reports on composite indicators prepared by the United Nations Development Programme (UNDP) and the Joint Research Centre of the European Commission.

4. Considering the challenges in the area, the Bureau selected leading, composite and sentiment indicators and official statistics for discussion at the 2014 CES plenary session. The purpose is to seek input from the CES member countries for considering possible further work in the area. The following section suggests some issues for discussion at the plenary session.

5. The updated version of the in-depth review paper is presented as document ECE/CES/BUR/2014/10. The conclusions and recommendations resulting from the in-depth review are presented in section VI of this document.

II. In-depth review discussion and decision by the Bureau

6. The Bureau discussed leading, composite and sentiment indicators in January 2014. Representatives of three Swiss universities had contacted the UNECE secretariat before the CES Bureau meeting with a proposal to cooperate on a research project on composite indicators. The aim of the project is to review a number of composite indicators and analyse their conceptual meaningfulness, statistical robustness and role in public debates. Mr. Sperlich (University of Geneva) and Mr. Dembinski (Observatoire de la Finance, Geneva, University of Fribourg) were invited to the Bureau meeting to present the proposal. The following points were raised in the discussion at the Bureau meeting:

(a) Strong demand exists for leading, composite and sentiment indicators. If statistical offices do not use their data and expertise to produce these indicators, other organizations may compile them with lower quality;

(b) On one hand, official statisticians are very cautious about leading, composite and sentiment indicators. Some statistical offices do not consider that producing such indicators provides a competitive advantage and is a good use of the limited resources. On the other hand, many national statistical offices and international organizations (such as OECD) are already producing leading, composite and sentiment indicators. Official statistics provide the quality criteria to ensure that the indicators are based on a sound methodology and can guide users on how to interpret the indicators. Producing these kind of indicators can improve users' perception of the relevance and value of official statistics;

(c) The area lacks international coordination and a systematic approach. There is a need for discussion at international level to achieve a common understanding of the role of statistical offices in this area. The in-depth review paper presents good proposals for further work. Organising a workshop or seminar on this topic could be considered;

(d) Collaboration with researchers is important. The research project proposed by the Swiss universities was considered useful. It was suggested that the project could focus on a few policy areas instead of covering the whole range. The outcomes of the project would be a valuable contribution to the discussion;

(e) It would be useful to develop a taxonomy of leading, composite and sentiment indicators. Various indicators are produced in countries and there is room for harmonization to enable better international comparability and reliability;

(f) The challenges related to leading and composite indicators are different from the sentiment indicators. There is a link between leading indicators and Big Data. Compiling composite indicators may require value judgments concerning the weighting of different components. This is not in line with the Fundamental Principles of official statistics;

(g) Providing a quality checklist for users might be a practical approach;

(h) The Active Ageing Index produced by UNECE will be added to the indicators described in the paper;

(i) Eurostat provided detailed comments in writing focusing on the need for a coherent classification and giving further information on on-going activities.

7. Following the Bureau decision the Secretariat updated the in-depth review paper to take into account comments by the Bureau (ECE/CES/2014/10). The topic will be discussed at the CES plenary session on 11 April 2014 (under agenda item 7a) to seek input from the CES members.

8. The Secretariat will prepare a proposal for further work, based on the CES discussion, for the October 2014 Bureau meeting. The Secretariat will follow up on the Swiss research project on composite indicators.

III. Key issues to be discussed

9. The challenges for official statistics are somewhat different concerning the leading, composite and sentiment indicators. Below is a short list of issues related to each type of indicators that can provide ideas for discussion at the Conference.

A. Leading indicators

10. Leading indicators are time series that show a leading relationship with economic movements such as growth, business-cycle and growth-cycle. Typically, leading indicators are constructed to predict the cycles of industrial production or gross domestic product (GDP), which are seen as proxy measures for economic development.

11. Some statistical offices produce leading indicators, whereas in most cases these indicators are produced by central banks, research institutes or private companies. Leading indicators are often economic indicators. However, reliability of the indicators and the use of econometric modelling may cause challenges for official statistics. On the other hand, producing leading indicators could boost the image of the statistical office as a provider of timely data.

12. **Issues for discussion:** The key issues to be considered regarding leading indicators relate to the role of official statistics: Would it be helpful, possibly in collaboration with the academia, to identify a list of potential leading indicators that could be produced with the involvement of statistical offices? Social and environmental statistics are often less timely than economic statistics. Would it be useful to develop leading indicators for social and environment statistics? These indicators could help to anticipate changes in societal wellbeing or monitor drivers of environmental changes.

B. Composite indicators

13. Composite indicators are formed when individual indicators are compiled into a single index on the basis of an underlying model of the multi-dimensional concept that is being measured. There are different kinds of composite indicators some of which are produced by official statistics (e.g. GDP).

14. Weighting and aggregating variables measured in different units is the key concern that affects the reliability of composite indicators, as these processes require judgement. Issues here are related to whether, where and how official statistics should be involved.

15. **Issues for discussion:** Would it be useful to define criteria for the types of composite indicators that national statistical offices' could produce or contribute to? The criteria could include for example high policy relevance of the indicator, availability of well-developed methodology and analytical soundness of the indicator. Another question is how to avoid misinterpretation. How could statistical offices react if composite indicators are based on official statistics but present a distorted picture of reality?

C. Sentiment indicators

16. Sentiment indicators are usually designed to show how a group feels about the market, business environment or some other factor. National statistical offices are increasingly getting involved in compiling sentiment indicators, e.g. consumer and/or business confidence indicators.

17. **Issues for discussion:** The issues here mainly deal with how to combine the role of national statistical offices as a producer of objective statistics with the production of statistics based on sentiments and expectations? Are these roles contradictory?

IV. Proposal for the Conference

18. The Conference of European Statisticians is invited to discuss the role of official statistics with regard to leading, composite and sentiment indicators. The CES members are invited to present their views on the possible way forward in this area. Organizing a workshop or seminar on this topic, or establishing a small group of countries and international organizations could be considered with the aim to look at the following issues:

(a) Defining the **responsibilities and boundaries** of national statistical offices' role with regard to leading, composite and sentiment indicators could be useful. Currently, national statistical offices' views regarding their role in this area are diverse. What are the current problems faced by statistical offices in this area? Should statistical offices be more active in providing data for these purposes or also offer their competence for improving the quality of the existing indicators? What kind of involvement of statistical offices would be most feasible and beneficial for users? Could a taxonomy of leading, composite and

sentiment indicators be developed, and what could be the criteria for the involvement of statistical offices in this area?

(b) The **communication challenge** is a crosscutting issue that is linked to the threats and opportunities for national statistical offices' involvement in leading, composite and sentiment indicators. How could statistical offices best support users of the various indicators – could a quality checklist be developed? To what extend could communication solve the potential threats to national statistical offices in this area? What would such a communication strategy include?

19. The Conference is also invited to endorse the outcome of the in-depth review of leading, composite and sentiment indicators, and take note of the updated in-depth review paper by the Secretariat (ECE/CES/2014/10).

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Outcomes of in-depth reviews carried out in 2007 - 2013

Prepared by the Secretariat

Summary

The document provides a summary of the outcomes of the in-depth reviews of selected statistical areas carried out by the Conference of European Statisticians Bureau in 2007-2013.

The Bureau discussed the outcomes of in-depth reviews in October 2013, and considered the in-depth review process of great value for the Conference of European Statisticians as it allows focusing the work on most topical areas and leads to tangible results. The Bureau carries out approximately three in-depth reviews each year, and selects one in-depth review topic for discussion at the Conference. These discussions have provided valuable input for the reviews. The Bureau noted that selection of the right topics and high quality of the in-depth review papers is crucial for ensuring a good outcome of a review. It also noted that the in-depth review papers are of great value and should be used more widely.

The document is submitted to the Conference for information.

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I. Background

1. This note was prepared at the request of the Bureau from its February 2013 meeting to describe the in-depth reviews and their outcomes. The note covers the reviews carried out during the period 2007-2013.

2. The in-depth reviews of selected statistical areas are an important tool for achieving the key objectives of the Conference of European Statisticians (CES) and its Bureau, namely:

(a) To promote close coordination of the statistical activities of international organizations;

(b) To respond to any emerging need for international statistical cooperation.

3. The in-depth reviews allow the Bureau to coordinate international statistical activities in the United Nations Economic Commission for Europe (UNECE) region. The reviews take stock of current work with the aim of identifying gaps or duplication of work and addressing emerging issues. The reviews are action oriented: the aim of the discussion is to decide on follow-up actions at the international level to address the issues identified by the review.

4. In the past, all statistical areas were reviewed in-depth over a two year cycle (one year economic statistics, the other year social statistics and environment statistics). The reviews were based on rapporteur reports prepared mostly by Eurostat, Organisation for Economic Co-operation and Development (OECD) or UNECE. The wide coverage and high frequency of reviews resulted in a heavy workload for the organizations concerned, a rather superficial discussion of individual statistical areas, and insufficient attention to the country perspective.

5. Therefore, the in-depth review process was changed during 2005-2006 to make the reviews more efficient and effective. In June 2006, the Conference decided to focus the reviews on high priority statistical areas where considerable work is ongoing or notable gaps exist. The topics should be selected from the 56 statistical areas listed in the Database of International Statistical Activities (DISA) classification of statistical activities, either single topics or ad-hoc groupings of the topics. The topics cover statistical subject areas but also methodologies of data collection and processing, and strategic and managerial issues.

6. In 2006, the Conference also decided that the reviews should focus on strategic issues, be more action oriented and include recommendations for further steps to be taken by the Conference. Starting from 2008 the Bureau has selected one in-depth review topic each year to be discussed at the CES plenary session prior to the discussion at the Bureau meeting to better involve the members of the Conference.

7. The Bureau considered the in-depth review process in February 2012 and adopted recommendations for organizing the reviews, including a template for preparing the papers that provide the basis for discussion (ECE/CES/2012/5). These Recommendations provide a good description of the current in-depth review process. In October 2013, the Bureau asked the Secretariat to update the template for in-depth review papers to recommend that the papers would identify priorities for national statistical offices taking into account their limited resources and analyse key user needs.

8. The annex presents a summary of the outcomes of in-depth reviews undertaken in 2007-2013. The table provides the main conclusion and main outcome for each review, and indicates the type of outcome, such as new work started, on-going work adjusted, tangible output (guidelines and recommendations) prepared, etc. A more detailed description of the

reviews, their outcomes and related initiatives is available at: www.unece.org/stats/ces.html.

II. Outcome and impact of in-depth reviews carried out in 2007-2013

9. The Bureau has reviewed in-depth 24 statistical areas over the last 6 years (2007-2013, approximately three in-depth reviews per year). The final review documents and their outcomes will be made available on the UNECE website[1].

10. The different types of outcomes of the reviews can be grouped as follows:

(a) Launching methodological work under the CES: creation of teams of specialists to develop new guidelines, recommendations, collections of best practices, etc.; adjusting the UNECE work programme in line with the recommendations of the review;

(b) Follow-up undertaken at other fora than the CES;

(c) Identifying a need for action but putting the actions on hold due to the lack of resources in the secretariat and/or countries; the issue is planned to be reviewed again in future;

(d) Increasing cooperation and exchange of information (in addition to identifying specific actions).

A. Launching methodological work

11. In many cases, the in-depth reviews have led to launching new methodological work under CES to address measurement challenges, gaps or lack of harmonization (see column 4 in the annex). For example, as an outcome of recent reviews the Bureau has set up four Task Forces in new areas: global production, measurement of household income, time-use surveys and ageing-related statistics. In other cases, the review has led to preparing new outputs in areas where the secretariat was already active, such as statistical dissemination and communication, or gender statistics (column 5 in the annex).

12. The aim of the work of the Task Forces is to prepare a tangible output, such as guidelines, recommendations, collections of best practices, etc. Nine reports, guidelines or recommendations are expected as an outcome of work resulting from in-depth reviews carried out in 2007-2012 (column 6 in the annex; additional outputs may be prepared in future as a result of some of the reviews undertaken in November 2012 and February 2012). So far, five reports have been finalized:

(a) Canberra Group Handbook on household income statistics, second edition;

(b) Developing gender statistics: A practical tool;

(c) Guide to improving statistical literacy;

(d) Revised Guide to communicating with the media;

(e) Guidelines for harmonizing time use surveys.

13. The following four recommendations or publications are currently being finalized, and are planned to be submitted to the Conference in 2014-2015:

[1] www.unece.org/statshome/areas-of-work/statsarchiveact00e/in-depth-reviews.html

(a) Guidelines on environmental indicators for EECCA countries;

(b) Quality of employment;

(c) Guide on global production;

(d) Ageing-related statistics.

14. In addition, other types of outputs have been prepared as a result of the in-depth reviews, such as:

(a) Wiki knowledge bases on using administrative and secondary sources in official statistics, and for sharing resources and experience in statistical data collection;

(b) Inventory of groups working on information and communication technology statistics.

15. In some cases, the outcome of the review has been a decision to organize a one-off event (seminar) to explore the issues in more detail and to decide whether new methodological work needs to be undertaken. Examples of such seminars are:

(a) CES seminar on measuring population movement and integration in a globalized world (2008);

(b) CES seminar on strategic issues in business statistics (2009);

(c) Joint UNECE, European Free Trade Association (EFTA) and International Monetary Fund (IMF) workshops on government and fiscal statistics for EECCA countries in 2011 and 2013;

(d) Seminar on new frontiers for statistical data collection (2012);

(e) Joint UNECE, OECD and Interstate Statistical Committee of the Commonwealth of Independent States (CIS-STAT) seminar on the way forward in poverty measurement (2-4 December 2013).

B. Follow-up activities at other fora than the CES

16. Many outcomes of the in-depth reviews contributed to work at other fora, often to global processes launched by the United Nations Statistical Commission (UNSC). This has been the case, for example with statistics on culture, agriculture, environment, housing and education.

C. Actions put on hold

17. It has happened in a few cases that the in-depth review identifies a need for action but these cannot be undertaken due to other, more urgent priorities and lack of resources. In some cases, the Bureau has put the actions on hold and has decided to come back to the issue after a few years to review whether there is still a need for follow-up.

18. For example, the in-depth review of population statistics in 2007 recommended setting up a Task Force to document best practices in population projections. However, the Task Force was not set up due to lack of interest from countries to participate in this work.

19. As a result of a review of housing statistics in 2009, the secretariat carried out a survey among the CES members to identify priority issues where future work might be undertaken at international level. The survey showed an interest in several topics from housing statistics, and a need for a standard international set of definitions, accounting procedures and guidelines. However, the survey did not identify a clear priority area for

follow-up international work. The Bureau decided to keep housing statistics on the list of follow-up items and come back to the topic in the future.

20. As an outcome of the in-depth review on education statistics in 2012, several countries and international organizations expressed interest in participating in a Task Force on measuring e-lea·ning, and expressed readiness to share good practice in integrating administrative, survey and census data on education. However, no country or organization volunteered to lead either of the two activities. Therefore, the start of these activities was put on hold until a later date.

21. In February 2013, the Bureau reviewed the issues of political and other community activities, including volunteering. The Bureau selected the issue as a possible CES seminar topic. The topic was not selected for CES 2014 seminars, but it will remain on the list of possible future seminar topics.

D. Increasing cooperation and exchange of information

22. Practically all in-depth reviews led to increased cooperation, networking and exchange of information among the Bureau members and with partner organizations, including with the United Nations Statistical Commission, its various working groups, UNECE Policy Committees, International Labour Organization (ILO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS), and United Nations Committee of Experts on Environmental-Economic Accounting (UN CEEA).

III. Conclusions

23. The UNECE review, carried out in 2013 by its member States, acknowledged that "the UNECE Statistics subprogramme, the Conference of European Statisticians and its related subsidiary bodies work in an efficient way, producing concrete results (methodological principles, recommendations, guidelines and databases) in a regular and on-going way that have clear value added for the region and beyond..." The review also concluded that "the subprogramme should continue the good cooperation with partner organizations such as Eurostat, the CIS-STAT, OECD, World Bank and IMF."

24. During the UNECE review, Statistics subprogramme was given as a good example, in particular with respect to the flexible manner of working through Teams of Specialists guided by concrete Terms of Reference, deliverables and sunset clauses. Some direct quotes mentioned include: "the CES has a unique and complementary role"; "the CES is the most important mechanism in statistics regionally and with a global impact"; and "it is not only attended by very high-quality and experienced people but is one of the most active and proactive international statistical forums in the world".

25. In-depth reviews are one of the key elements in ensuring that the work undertaken by CES remains relevant. It allows being proactive in identifying areas that require internationally coordinated development effort. The reviews have highlighted important gaps which can be filled, they have led to methodological work and new guidelines that address common problems in statistics.

26. All reviews carried out in 2007-2013 concluded with concrete recommendations. In twelve cases (55%) the reviews have resulted in starting work under the CES in a new area, or adjusting the on-going UNECE work programme. In nine areas (41%), the work has resulted in preparing guidelines or recommendations (some other tangible outputs can be expected from the reviews that were carried out in 2012-2013). In two cases, a CES

seminar and in two cases an expert level seminar have been organised to discuss the issues in more detail. In three cases (14%), the need for follow-up work was identified but has been postponed due to other priorities and lack of resources.

27. In-depth reviews guide the work of the UNECE secretariat and the international Teams of Specialists to focus on areas of high relevance, and to shift resources to where they are needed most. The work builds on the knowledge and experience of a pool of experts of national statistical offices and international organisations. The choice of the topics to be reviewed has a big impact on the process, as well as the good quality of the papers that are the basis for the discussion and active contributions in the discussion from the Bureau members.

Annex

Summary of the outcomes of the in-depth reviews carried out in 2007-2013

Review topic	Time	Main conclusion and output under CES	Activities under CES				Follow-up at other fora	Work put on hold
			Network started	Ongoing work adjusted	Guidelines, recommendations, etc. prepared	Seminar/ workshop organized		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Business statistics (IMF, Finland, UNSD, UNECE, Eurostat, Canada)	Feb-07	Main conclusion: "Lack of guidelines and coherence; need for a wider vision on the direction in which business statistics should develop" - A small group to prepare an overview of key strategic issues and organize a CES seminar - A 2009 CES seminar on *Strategic issues in business statistics*				X		
2. SDMX initiative (SDMX sponsors)	Feb-07	Main conclusion: "Encouraged organization of capacity building activities and use of existing meetings to spread awareness of SDMX" - UNECE-led work on metadata standards encompasses SDMX, and now falls under the HLG		X				
3. Population statistics (UNECE)	Feb-07	Main conclusion: "Best practices in demographic projections and post-census revisions should be documented; continue the active work in censuses; migration an important issue" - Decided not to establish a Task Force on demographic projections due to lack of participation from countries - 2008 CES seminar on *Measuring population movement and integration in a globalized world*		X		X		X
4. Income, living conditions and poverty (OECD)	Oct-07	Main conclusion: "Good progress towards a definition of household income, but no agreement on the definition of poverty, rather a set of indicators for the purpose" - In 2008, Canada drafted a road map with options for further work - In 2009 Bureau set up a TF to update the *Canberra Group Handbook* (CES endorsed the Handbook in 2011)	X		X			
5. Gender and special population groups (UNECE)	Oct-07	Main conclusion: "Continue the active work on gender and link it with the global initiatives" - CES Manual, *Developing Gender Statistics: A Practical Tool*, in 2010 - In 2010, TF on indicators of gender equality – to CES 2014 for endorsement		X	X			
6. Environment statistics (Eurostat)	Feb-08	Main conclusion: "Coordination has improved, but the main problem is prioritization of activities towards a coherent system of environment statistics" - In 2009, UNECE Committee on Environmental Policy and CES set up a Joint TF on environmental indicators in Eastern Europe, Caucasus and Central Asia, and South-East Europe. - revised *Environmental Indicator Guidelines* – to be published in 2013		X	X			
7. Culture statistics (Finland)	Feb-08	Main conclusion: "Encouraged consultation between CES/UNSC and the UNESCO institute in developing a framework for cultural statistics" - The CES reviewed the *UNESCO Framework for Cultural Statistics* in 2008 - Eurostat re-launched working group on cultural statistics in 2008					X	

8. Agricultural statistics, incl. forestry and fisheries (Eurostat, United States and Brazil)	Feb-08	Main conclusion: "Better coordination of work is needed, but need to wait for the outcome of the global process in agriculture statistics" - In 2010, the UNSC led process on agricultural statistics started, there was no need to establish a TF under CES					X	
9. Measurement of labour cost (OECD)	Oct-08	Main conclusion: "Many concerns raised in the review paper were being addressed by other international agencies, e.g. ILO and OECD"					X	
10. Housing statistics (Poland)	Feb-09	Main conclusion: "Lack of common definitions, procedures and guidelines hamper the work, several initiatives are undertaken at other fora" - A UNECE survey on housing statistics among CES members to identify areas where work should be undertaken at international level - Bureau decided to consider follow-up work later					X	X
11. Statistical dissemination, communication and publications (Steering Group)	Oct-09	Main conclusion: "Work should be undertaken on statistical literacy in the ongoing work" - In 2012, a *Guide to Improving statistical literacy;* Revised *Guide to communicating with the media*		X	X			
12. Government finance, fiscal and public sector statistics (IMF)	Oct-09	Main conclusion: "Call for more cooperation between international agencies active in government finance statistics, and need for training" - EFTA/IMF/UNECE training workshops in 2011 and 2013				X		
13. The use of secondary and mixed sources for official statistics (UNECE)	Jun-10	Main conclusion: "Sharing information and developing guidelines would be useful as part of ongoing work" - A UNECE Wiki Knowledge Base on the topic - Publication: *Using administrative and secondary sources for official statistics* - Seminar on *New frontiers for statistical data collection* in 2012		X	X	X		
14. Time-use surveys (Germany)	Nov-10	Main conclusion: "Relevance of time-use data and insufficient harmonisation that reduces the value of this expensive and complicated survey" - TF on time-use surveys set up in 2010 - *Guidelines for harmonizing time use surveys* – to CES in 2013 and to Bureau for endorsement in October 2013	X		X			
15. Measuring information society and statistics on science, technology and innovation (Australia)	Nov-10	Main conclusion: "There may be scope for better coordination of the many initiatives and development of a conceptual framework would be useful" - An inventory of the groups working in ICT statistics - In 2011, CES recommended developing a conceptual framework - The need to develop UN standards to measure ICT raised at UNSC			X			
16. Education statistics (Australia)	Nov-11	Main conclusion: "Guidelines are needed for the measurement of e-learning, and good practices should be shared on the integration of different data sources and education statistics produced by various agencies" - Several countries and international organizations expressed interest in taking part but no agency was ready to lead the work - Activities put on hold until a later date						X
17. Global manufacturing (the Netherlands)	Nov-11	Main conclusion: "Practical guidelines for addressing the unresolved issues related to global production in line with the 2008 System of National Accounts (SNA) and Balance of Payments Manual are needed" - A TF to develop practical guidelines on global production - *Guidelines on Global Production* – to CES members for consultation in 2014	X		X			

18. Household survey methods (Canada)	Nov-11	Main conclusion: "Household surveys are important building blocks of statistical systems and should be better integrated with other data sources" - The meeting on *New frontiers for statistical data collection* discussed among other topics household surveys		X				
19. Population ageing (UNECE)	Nov-12	Main conclusion: "The availability, accessibility and comparability of statistical data need to be improved to support ageing-related policies" - In 2013, A TF on ageing-related statistics - The final report with an overview of current practices, analysis of data gaps and recommendations for statistical offices – to Bureau in 2014	X		X			
20. Banking, insurance and financial statistics (IMF)	Nov-12	Main conclusion: "Many initiatives exist and are well coordinated, but there would be room for further improvements in the alignment of concepts and methods and strengthening the cooperation between national statistical offices and central banks"					X	
21. Poverty statistics (Ukraine and Eurostat)	Nov-12	Main conclusion: "Addressing poverty measurement is urgent considering the on-going public discussion. There is no forum for solving the lack of common definitions, methodologies and indicators for the monitoring of poverty" - The seminar *The way forward in poverty measurement*, held on 2-4 December 2013 - In 2013, a proposal was made at CES plenary session to consider organising a high-level seminar on poverty measurement in the future	X		tbc	X		
22. Political and other community activities, incl. volunteering (Mexico)	Feb-13	Main conclusion: "These data are increasingly important, yet challenging to measure. Some of the concepts are new and would require precise definitions" - Added to the list of possible CES seminars; not selected for a seminar in 2014	tbc		tbc	tbc		
23. Big Data (Task Team on Big Data)	Oct-13	Main conclusion: "asked the High-Level Group for the Modernisation of Statistical Production and Services to take this work forward" - Added to the list of possible CES seminars; not selected for a seminar in 2014		X	tbc	tbc		
24. Entrepreneurship statistics (Eurostat and OECD)	Oct-13	Main conclusion: "The Bureau asked the Task Force on statistical business registers to address the issues related to business registers in the in-depth review paper." - OECD and Eurostat drafted a proposal for possible further work for the next Bureau meeting.		X	tbc	tbc		
Total			5	9	9	5	5	3

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Item 7 (b) of the provisional agenda
Outcomes of the in-depth reviews carried out by the Conference of European Statisticians Bureau

Results of the consultation on the outcomes of in-depth reviews

Note by the Secretariat

Summary

This note summarizes the comments by members of the Conference of European Statisticians on outcomes of in-depth reviews carried out by the Bureau of the Conference. The secretariat conducted the electronic consultation in March 2014.

A total of 28 replies were received in response to the request for comments: from 26 countries and 2 international organizations.

In view of the support expressed through the electronic consultation, the Conference is invited to endorse the outcomes of the in-depth reviews on Big Data, entrepreneurship statistics and measuring social protection.

The Conference will also be invited to discuss the role of National Statistical Offices related to leading, composite and sentiment indicators. The Bureau will discuss the possible way forward in this area in October 2014 based on the feedback received from the consultation and the discussion at the CES plenary session.

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I. Introduction

1. This note summarizes the comments by members of the Conference of European Statisticians (CES) on the outcomes of in-depth reviews carried out by the CES Bureau in October 2013 and January 2014. The electronic consultation was conducted by the Secretariat in March 2014.

2. The purpose of the reviews is to improve coordination of statistical activities in the region of the United Nations Economic Commission for Europe (UNECE), identify gaps or duplication of work, and address emerging issues. These reviews focus on strategic issues and highlight concerns of statistical offices of both a conceptual and coordinating nature.

3. A total of 28 replies were received in response to the request for comments. The following 26 countries and 2 international organization replied: Austria, Belarus, Canada, Czech Republic, Denmark, Finland, France, Georgia, Hungary, Israel, Italy, Latvia, Lithuania, Mexico, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Turkey, United Kingdom, United States, Organisation for Economic Co-operation and Development (OECD) and the Eurasian Economic Commission.

II. Comments on the in-depth review on leading, composite and sentiment indicators

A. General comments

4. The following general remarks were made during the consultation:

(a) Austria and Mexico note that production of leading, composite and sentiment indicators by national statistical offices (NSOs) is of great importance as they can ensure high quality standards. However, statistical offices may need to invest more into quality assurance of these kinds of indicators in the future. Austria refers to the Report by Stiglitz et al (2008) noting that composite indicators might not be useful in the realm of social indicators as the focus in social issues is rather on aggregation and thus on indicator scoreboards;

(b) Finland and Canada reported producing a set of leading indicators especially on the economy. Finland has also developed a set of leading indicators (Findicators) together with the main users, and prefers in general the use of a set of indicators to producing one composite indicator;

(c) Italy notes that producing leading indicators can be considered as a task for official statistics. Regarding composite indicators, it is important to avoid misinterpretation by disseminating exhaustive metadata of the methodology used. Since many statistical offices produce sentiment indicators, Italy sees "soft" and "hard" data as complementary, and notes that conducting both types of surveys at statistical offices can provide synergies;

(d) In Latvia producing composite and sentiment indicators has become part of the regular work of the statistical office. Sometimes composite indicators show direction better than a scoreboard of many separate indicators, and make it easier to compare progress of countries over time. For example the people at-risk-of-poverty or social exclusion (AROPE) indicator has proven to be useful during the economic crisis;

(e) Sweden and Slovakia have experienced a rising demand for leading and business consumer surveys as they provide timely information for effective decision making. These surveys can be used with short-term business statistics for macroeconomic forecasting or as a benchmark for quarterly flash estimates of Gross Domestic Product (GDP);

(f) Switzerland notes that regardless of the strong demand for composite indicators, producing them would require additional resources and entail subjective decisions on weights that may not be easy to align with the principles of official statistics;

(g) OECD pointed out that the range of topics covered in the in-depth review is broad and the document remains general for a focused discussion on NSOs' role. The use of econometric modelling within statistical institutes is an issue for many NSOs and Central Banks, although most economic and social indicators published by NSOs already rely on sophisticated techniques (e.g. imputation). It is important that the communication around these indicators be very clear, with reference made to documentation on data collection, data sources, compilation methods, confidence intervals and expected revisions.

B. Views on the possible way forward

5. Most countries and organizations express support to both streams of further work, firstly to the idea to organize a workshop or seminar on leading, composite and sentiment indicators, and secondly to establishing a small international group to:

(a) Define national statistical offices' role (and its boundaries) with regard to leading, composite and sentiment indicators;

(b) Design communication strategies for national statistical offices for dealing with issues related to these indicators.

6. Latvia and Sweden consider it useful to organize a workshop or seminar before establishing a small international group. Italy, Mexico and Turkey, however, support the idea of establishing a small international group rather than organizing a workshop or seminar.

7. Countries and organizations made the following suggestions regarding priority areas for future work:

(a) Many countries noted that further methodological work should also aim at developing an internationally agreed taxonomy of these indicators and related methodologies.

(b) Italy and The former Yugoslav Republic of Macedonia suggested designing communication strategies for NSOs with regard to leading, composite and sentiment indicators. Mexico agrees that the international group should discuss the strategy for dissemination, but also review methodologies and approaches, in particular relating to economic growth cycles. Lithuania explicitly mentions that, at the first stage, the work should identify the role of national statistical offices with respect to these indicators.

(c) Several countries and organizations (for example Canada, Denmark, Israel, Lithuania, Slovakia and OECD) mention that international work towards harmonizing the work for example by drafting recommendations and practical guidelines on the compilation of leading, composite and/or sentiment indicators would be useful. Canada and Denmark note that it should be left to each country to determine where the production of the indicator is best done. Therefore, any guidelines should be directed to all producers of statistics (private and public). It seems that additional economic composite indicators are not needed, but the work should review the feasibility of establishing a framework for the development

of a wellbeing indicator. Israel notes that the methodological work should involve key partners, such as central banks.

(d) Italy, Hungary, Sweden and Switzerland would give priority to work on economic leading indicators, for example on GDP or to nowcasting techniques in general. This is because statistical offices are already familiar with many related methods and timeliness continues to be a big challenge for statistics. Italy and Mexico would also find it useful to define criteria for the types of composite indicators that could be produced by official statistics. Mexico emphasizes the need for collaboration with the academia in identifying the criteria and list of potential leading indicators that could be produced with the involvement of statistical offices.

(e) Portugal doubts the usefulness of international work in the field of composite and leading indicators. However, it would be important to make methodological information available for users when these indicators are produced.

(f) Spain proposes to start by carrying out a study on the different methodologies and their differences from traditional methodologies used in statistical production.

III. Comments on the outcome of the in-depth review of Big Data

8. The responding countries support the outcome of the in-depth review on Big Data.

9. Several countries emphasise the challenge that Big Data presents for official statistics (Czech Republic, Finland, Latvia, Turkey). Establishing priorities in this area is considered very important (Spain). Austria and the Czech Republic underline the need to clearly define how Big Data could be used and how the results derived from Big Data could be integrated into other statistical data and the publication process.

10. Several countries note that collaboration and coordination of work at international level in this area is essential (Canada, Portugal, Turkey). The work of the High-Level Group and the Task Team on Big Data is of crucial importance in this respect. Canada points out that the work has begun, for example through the UNECE sprint sessions that discussed prioritisation of the activities of the proposed project on Big Data under the High-level Group on Modernisation of Statistical production and Services.

11. Countries agree with the idea that the related technical issues can be solved using the help of the private sector (Italy, Latvia). The need for NSOs to share their experience on the IT infrastructure that can support the use of Big Data is emphasised (Italy). Turkey calls for urgent action by statistical offices and proposes exploring new solutions, such as storing Big Data on cloud servers set up by governments.

12. Several countries stress that the main challenges are related to legal and financial issues (Austria, Lithuania, USA). The United States note: "The greatest concern with Big Data may not be methodological. Instead, legislative components regarding access to and use of data, managing the public trust, and the related issue of financial impact are somewhat greater concerns. As an example of financial impact, some websites disallow the use of webscraping without specific approval by the site's owner. Without specific legislation, the cost for international statistical agencies to contact website owners and receive this permission, in addition to other costs charged for such access, could be significant. As nation states support the global internet infrastructure, their agencies should not be charged or incur the cost for access to what we consider a "public good." Therefore, perhaps Big Data access is a more immediate concern than methodological concerns, since the latter could not be well explored without access to the data." Austria notes that the additional IT expenses should also be considered.

13. The need to collect practical experiences and case studies on the use of Big Data is emphasised (Finland, Italy). Italy underlines in particular the usefulness of case studies describing use scenarios, benefits and risks, and concrete experiences in the field. Finland notes: "In general, the Big Data hype raises a lot of talk but very little concrete, real big data examples - or samples. Thus, it seems that the main challenge for official statistics is to get that data first even though we can already foresee what kind of problems could rise if we had Big Data on a specific field. Indeed, as raised in the paper, legal aspects are very relevant; Open Business Data are not much mentioned these days. Clearly, the real Big Data cases are the ones any global or national project on Big Data would need.

14. Creating an environment for using Big Data might help in reacting and being able to measure current phenomena rather than carrying consistent time series over time. Perhaps, even still applications on specific subject-matter areas are relevant. What if national statistical office produced and planned an application that would be interesting and attractive for the general audience of mobile users? It is worthwhile to note that such application does not have to be Big Data but it could help such communities participating in the big data challenge.

15. As Big Data comes in such a huge challenge for official statistics it becomes much easier to mix it with a general challenge to find new data sources (for enriching official statistics) and new ways to produce statistics (GIS) in which Big Data could play only a part. But first we have to see case studies and find the Big Data."

16. The comments provided by countries will be taken into account in further work on Big Data under the CES, including in the project under the High-level Group on Modernization of Statistical Production and Services.

IV. Comments on the outcome of the in-depth review of entrepreneurship statistics

17. All responding countries and organizations support the outcome of the in-depth review of entrepreneurship statistics, the issues raised in the discussions and the conclusions presented in the in-depth review paper (ECE/CES/2014/8 and Add.1). Further work in this area is welcome.

18. OECD and Eurostat, as recommended by the CES Bureau will prepare a proposal for possible future activities on entrepreneurship statistics. A meeting of the joint OECD-Eurostat Entrepreneurship Indicators Programme will be held on 12 May to take stock of the work accomplished so far. The meeting will also discuss methodological approaches for the development new indicators. The meeting will be open to participants from member countries of UNECE, Eurostat, OECD and partners.

19. Countries emphasise that good quality statistical business registers are essential for the quality and comparability of entrepreneurship statistics (Canada, Italy, Latvia, Mexico, Portugal and Turkey). Therefore, the Task Force on Statistical Business Registers should consider those challenges of entrepreneurship statistics that relate to business registers. The joint Eurostat/OECD Entrepreneurship Indicators Programme (EIP) has done important work in developing a harmonised set of indicators. Latvia and Italy see a need to harmonise data further.

20. Spain and United States express some concern about harmonising the statistical units of data collection on entrepreneurship. The approach should be feasible and robust enough for collecting relevant information from complex enterprises.

21. Italy welcomes the establishment of a Task Force on entrepreneurship statistics. United States points out that creating a new Task Force on entrepreneurship statistics may

be a bit premature given the current developing operationalization of entrepreneurship and limited amount of existing national statistical practices in this area. Canada is planning to set up an internal expert group in Statistics Canada on entrepreneurship statistics.

22. Finland and United States provide detailed comments on different aspects of entrepreneurship statistics (measuring self-employed, conceptualisation of entrepreneurship, harmonising across countries, etc.). Canada and France comment on the relation of the work with Wiesbaden Group.

23. All comments will be forwarded to the relevant groups and taken into account in further work in this area.

V. Comments on the outcome of the in-depth review of measuring social protection

24. The responding countries agree with the conclusions and recommendations presented in the in-depth review document on measuring social protection, and welcome continuation of efforts to harmonize the international definitions and classifications (Canada, Israel, Latvia, Lithuania, Mexico, Netherlands, Portugal, Spain, Switzerland, Turkey). Italy emphasises that it is an important area that requires adoption of broad and strategic measures. Finland considers measurement of social protection a challenge although the Nordic countries have monitored and measured social services for a long time.

25. Mexico and Turkey recommend to start with developing a small set of internationally comparable indicators on social protection.

26. Italy, Portugal, Spain, Switzerland and Turkey refer to the ESSPROS initiative as a good tool to harmonise social protection statistics. Portugal notes that its comparability with other initiatives could be further improved, including with the OECD SOCX.

27. Canada proposes that one dimension of the work of the CES Task Force on Poverty Measurement could focus on the social protection mechanisms.

28. Several countries point out that further work in this area should address the challenges faced by less developed statistical systems (Canada, Italy).

29. The CES Bureau could consider organising a seminar on this topic (Portugal) but its content and format should be clearly defined (Canada).

VI. Proposal

30. Given the support by countries, the Conference is invited to endorse the outcomes of the in-depth reviews on Big Data, entrepreneurship statistics, and measuring social protection.

31. The secretariat will forward the detailed comments by countries and organizations to the authors of in-depth review papers and the relevant Task Forces to be taken into account in further work.

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Follow-up to the CES 2013 seminar on challenges in implementing the System of Environmental-Economic Accounting and measuring sustainable development

Follow-up to the 2013 Conference of European Statisticians seminar on challenges in implementing the System of Environmental-Economic Accounting and measuring sustainable development

Note by the Secretariat

Summary

This note provides information on the progress in follow-up to the decisions of the Conference of European Statisticians 2013 plenary session regarding the implementation of the System of Environmental-Economic Accounting and measuring sustainable development. The Bureau discussed the follow-up at its meetings in October 2013 and January 2014, and decided on a number of activities.

Work in several areas is already ongoing. In some areas it is necessary to wait for the outcome of another process (pilot testing of indicators sets from the CES Recommendations, establishing the Sustainable Development Goals). The next step to be currently undertaken is the preparation of stocktaking reports on transboundary impacts of sustainable development, measuring sustainable development at different scales, and linking subjective and objective indicators. Countries/international organizations that are willing to contribute to the stocktaking reports are invited to contact the secretariat (tiina.luige@unece.org).

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I. Introduction

1. This note summarizes the proposals and decisions for follow-up activities which emerged from the following events and documents during the 2013 Conference of European Statisticians (CES) plenary session:

(a) 2013 CES seminar on challenges in implementing the System of Environmental-Economic Accounting (SEEA) and measuring sustainable development in follow-up to Rio+20;

(b) Endorsement of the *CES Recommendations on measuring sustainable development*;

(d) High-level workshop on *Challenges in implementing SEEA and measuring sustainable development in follow-up to Rio+20* for countries of Eastern Europe, Caucasus and Central Asia held back-to-back with the CES plenary session on 12-13 June 2013.

2. The Conference asked the Secretariat and the CES Bureau to follow up on the issues raised during the seminar, and to discuss how to implement the proposed actions. The CES Bureau discussed the follow-up to the 2013 CES seminar and the related events at its October 2013 and January 2014 meetings.

3. Section II of this paper presents the decisions and follow-up actions undertaken after the 2013 CES plenary session. These can be grouped under four headings:

(a) Contributing to the process of setting up the sustainable development goals (SDG) and promoting the *CES recommendations on measuring sustainable development*;

(b) Implementing the *CES Recommendations on measuring sustainable development*;

(c) Further methodological work on measuring sustainable development;

(d) Support to the implementation of SEEA in the UNECE region.

II. Follow-up to the 2013 Conference of European Statisticians seminar and related events: decisions and progress of work

A. Contributing to the Sustainable Development Goals process and promoting the *CES Recommendations on measuring sustainable development*

4. The relevant CES decisions are reflected in paras 25 and 50 of the report of the CES 2013 plenary session[1]:

> *"25 (a) Establish a clear connection between statisticians and the political level in measuring sustainable development. Use the available opportunities for this purpose, for example the UN Open Working Group on Sustainable Development Goals (SDGs) and the United Nations Statistical Commission (UNSC) Friends of the Chair group on broader measures of progress.*

[1] ECE/CES/85, available at: http://www.unece.org/stats/documents/2013.06.ces.html

50 (f) Put in place promotional and communication activities to promote the Recommendations widely among policy makers and statisticians, and also in other regions;

50 (g) Ensure that the SDG process, including the UNSC Friends of the Chair Group, is informed about the Recommendations by the Joint UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development."

5. After the CES 2013 plenary session, the following actions have been undertaken:

6. The electronic version of the *CES Recommendations on measuring sustainable development* was published (www.unece.org/publications/ces_sust_development.html). The printed publication was issued in March 2014.

7. The CES Bureau emphasised the importance of translating the CES Recommendations into Russian. The draft Russian translation of the publication has been prepared and is currently being checked for quality and consistency.

8. The CES Recommendations provide important input to the SDG process through the UNSC Friends of the Chair group on broader measures of progress (FOC). Several CES members, including UNECE, are members of the FOC and thus contribute to its work.

9. The FOC group prepared a report[2] that was discussed by the UN Statistical Commission on 4 March. The report strongly refers to the CES Recommendations. It emphasizes that the CES Recommendations take into account all research and initiatives in this area, contribute to the clarification of the notion of well-being, social progress and sustainable development, and link the conceptual aspects related to the human well-being 'here and now', 'elsewhere' and 'later'. The twenty sustainable development themes and three sets of indicators identified in the Recommendations can be easily linked to the proposals for SDGs and targets. The FOC group recommends to the international statistical community to take into account the framework presented in the CES Recommendations when choosing the indicators to measure SDGs and related targets.

10. The UNECE secretariat as a member of the FOC group contributed to the preparation of a number of statistical notes submitted to the UN Open Working Group (OWG). The draft statistical notes are available as a background document for the 45th session of UNSC[3].

11. The statistical note on "Sustained and inclusive economic growth and infrastructure development and industrialization" strongly refers to the work of the joint UNECE/Eurostat/OECD Task Force on measuring sustainable development (TFSD) and the CES Recommendations. It is noted that: "The 2013 report of the TFSD on a conceptual framework and suggested indicators for measuring sustainable development presents a good starting point for the monitoring of sustained and inclusive economic growth. The analysis undertaken by the TFSD has further determined that a large number of expected indicators can be informed by official statistics compiled for the implementation of SNA 2008 and SEEA 2012. This presents a move away from an ad-hoc indicator approach to a broad based, balanced and sustainable national statistical capacity building approach determined by country policy priorities, ownership and statistical information management."

[2] E/CN.3/2014/4, available at: http://unstats.un.org/unsd/statcom/sc2014.htm

[3] http://unstats.un.org/unsd/statcom/doc14/BG-FOC-Broader-measures.pdf

12. The Secretariat will consider additional promotional and communication activities of the CES Recommendations to ensure wider awareness about them among policy makers and statisticians, including in other regions.

3. Implementing the *CES Recommendations on measuring sustainable development*

1. Pilot testing

13. The relevant CES decision is as follows:

"50 (b) Pilot test indicator sets with a sample of countries."

14. Eight countries volunteered to undertake pilot testing: Australia, Italy, Kazakhstan, Mexico, Russian Federation, Slovenia, Turkey and Ukraine.

15. Furthermore, Italy, Mexico, Slovenia and Ukraine have informed the Secretariat that they are already using the CES Recommendations in developing/reviewing their national sustainable development indicator sets.

16. The CES Bureau discussed the procedure of pilot testing in January 2014. Following the CES Bureau decision, the pilot testing is currently underway with mapping the indicators proposed in the CES Recommendations with the indicators used in countries. The work will continue with discussing the problems encountered and considering proposals for fine-tuning the framework and indicator sets, if needed. Case studies on the experiences of using the CES Recommendations in Italy, Mexico, Slovenia and Ukraine will be compiled.

17. In addition to the pilot testing by the eight countries organised by UNECE, OECD plans to include in their 2015-16 work plan testing of the indicators in OECD countries with the perspective of using them for monitoring and benchmarking the comparative performance of countries. This work is planned to be pursued in close collaboration with UNECE and the countries that will pilot test the indicators.

2. Implementation strategy and practical guidance

18. The relevant decisions of CES are:

"25 (b) Prepare an implementation strategy for the Recommendations of the Joint UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development and develop practical guidance on how to implement the Recommendations.

50 (a) Draft a strategy for implementing the Recommendations of the Joint UNECE/Eurostat"/OECD Task Force on Measuring Sustainable Development; considering how to extend this work further in a broader international context;

50 (c) Develop practical guidance for the implementation of sustainable development indicator sets."

19. The work on developing practical guidance and an implementation strategy will start after the pilot testing of the indicator sets proposed in the Recommendations. It will be also useful to know the outcome of the UN process of setting up the SDGs and the related targets and indicators for this purpose.

3. Linking/adjusting the indicator sets to the Sustainable Development Goals

20. The CES decided on the following:

"50 (d) Link/adjust the indicator sets to the Sustainable Development Goals, targets and indicators, once these are defined"

21. The process of establishing the SDGs is underway. The different work streams that provide input to the process should be completed by September 2014. By end 2014, the UN Secretary General will issue a synthesis report incorporating all inputs. The Goals will be adopted by the UN General Assembly at a high-level Summit in September 2015.

22. The work on adjusting the indicator sets from the CES Recommendations to the SDGs should be undertaken starting from 2015 when the SDGs and related targets and indicators will be defined.

C. Further methodological work

23. The relevant decisions are reflected in the 2013 CES report as follows:

"25 (c) Continue methodological work on measuring the global dimension and transboundary impacts related to sustainable development, the human and social capital, and measuring sustainable development at regional and sub-national levels. This work could be undertaken through a dedicated Task Force.

50 (e) Further work on transboundary impacts in the context of sustainable development, on distributional aspects, and on measurement of risks"

24. Proposals for future work were also identified in the CES Recommendations and in country comments on the Recommendations (ECE/CES/2013/4 and Add.1). These included future work on the following topics: financial, natural, human and social capital; distributional aspects (inequality); time-use; linking subjective and objective indicators; measuring sustainable development at different scales (regional level, urban/rural areas, company level, etc.); satellite accounts/sustainability accounting; and developing harmonised indicator sets for measuring sustainable development.

25. In several areas work is already being undertaken:

(a) The CES set up a Task Force on human capital chaired by Statistics Norway;

(b) OECD is working on social capital;

(c) *Guidelines on time-use surveys* were adopted by the CES Bureau in October 2013. Further work will be undertaken to collect methodological material on time-use surveys. A proposal to set up a Task Force for developing guidelines on valuing unpaid household work will be discussed by the CES Bureau in October 2014;

(d) UNECE organised a seminar on measurement of poverty in December 2013 which covers some of the distributional aspects. The Bureau established a Task Force on poverty measurement in January 2014;

(e) Measurement of financial and natural capital is dealt with in connection with the implementation of the SNA 2008 and SEEA.

26. The Secretariat consulted the proposals for further methodological work with a small informal Steering Group to identify priorities. This group consisted of a few countries and organizations who participated actively in the UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development (Australia, Canada, France, the Netherlands, Slovenia, Switzerland, Eurostat and OECD). The group considered the following topics as a priority:

(a) Measuring transboundary impacts in the context of sustainable development;

(b) Measuring sustainable development at different scales;

(c) Linking subjective and objective indicators.

27. Among the small group of countries that were consulted, Australia, France, the Netherlands and Switzerland considered measurement of transboundary impacts as a priority. France, the Netherlands and OECD have done some work on footprint indicators. Switzerland established concepts for the measurement of transboundary impacts in 2008 and regularly updates a set of indicators on this topic. Countries emphasised that the measurement of transboundary impacts should go beyond environmental issues to consider other aspects, such as the brain drain/gain, knowledge transfers, international flows, etc.

28. Australia, the Netherlands, Slovenia and Switzerland considered measuring sustainable development at different scales a priority. The Netherlands plans to undertake a project to compare the framework from the CES Recommendations with the framework used at company level (the Global Reporting Initiative) and possibly at product level (the Sustainability Consortium). Switzerland maintains two SDI-Systems for the cantons and cities of Switzerland, and the Swiss indicator system MONET is being used by a Swiss canton. OECD has been recently working on a project aimed at developing sub-national metrics for the 'here and now' dimension of the CES Recommendations ("How's Life in Your Region?"). Outcomes of this work could possibly feed into work to develop sub-national measures for the 'later' and 'elsewhere' dimensions.

29. Australia and Slovenia considered linking subjective and objective indicators as a priority. France noted that they have done some work in this area.

30. The consulted group of countries and organizations proposed that follow-up work in these areas should take the form of stocktaking of the existing activities. OECD is ready to provide references to relevant reports that could inform the stocktaking exercise. Eurostat is ready to contribute to the small informal Steering Group.

31. The Bureau decided that the Secretariat with the assistance of a small group of countries and organizations will prepare stocktaking reports on the three topics listed above. The work will start with 'Measuring transboundary impacts in the context of sustainable development' and continue with 'Measuring sustainable development at different scales' and 'Linking subjective and objective indicators.' CES members are invited to contribute to the stocktaking reports.

D. Support to the implementation of the System of Environmental-Economic Accounting

32. The CES 2013 decided the following:

"25 (d) Strengthen the governance of and support to the SEEA implementation in collaboration with UNSD taking into account national and regional circumstances;

25 (e) Develop mechanisms to share good practices and exchange experience in SEEA implementation, in collaboration with UNSD, for example through an electronic forum."

33. Furthermore, the high-level seminar on the implementation of SEEA and measuring sustainable development for the countries of Easter Europe, Caucasus and Central Asia on 12-13 June asked for support in the implementation, and for a forum to share experience and discuss specific problems in this area.

34. The Secretariat consulted the proposal to organise a seminar on implementation of SEEA with the small informal Steering Group (Australia, Canada, France, the Netherlands, Slovenia, Switzerland, Eurostat and OECD). The group considered it useful to have a meeting to exchange experience in implementation of SEEA, in coordination with other fora where the related issues are discussed.

35. OECD informed that they have recently established an Expert Group on the implementation of SEEA that brings together national accountants and environment experts to guide the work on compiling a set of core tables in this field. OECD is ready to cooperate with UNECE in organising a seminar to share experiences in the SEEA implementation.

36. In January 2014 the Bureau asked the secretariat to organize a seminar on SEEA implementation, in collaboration with OECD.

V. Conclusions

37. Several follow-up actions to the CES 2013 seminar are already ongoing. The secretariat is contributing to the Sustainable Development Goals process through the UNSC Friends of the Chair Group on broader measures of progress and other channels, and is considering additional ways how to promote the *CES Recommendations on measuring sustainable development*.

38. The pilot testing of indicator sets from the CES Recommendations is underway.

39. For developing practical guidance on implementation of the CES Recommendations, it is necessary to wait for the outcome of the pilot testing. The indicator sets from the CES Recommendations will be adjusted to SDGs and related targets when these will be defined.

40. Methodological work in several areas identified for future work is already undertaken. Concerning the areas not yet addressed, the next step is to prepare stocktaking reports on:

(a) Measuring transboundary impacts in the context of sustainable development;

(b) Measuring sustainable development at different scales; and

(c) Linking subjective and objective indicators.

41. The secretariat will organise a seminar for the exchange of experience in implementation of SEEA in collaboration with OECD. The seminar could take place in autumn 2014/spring 2015.

VI. Proposal for the Conference

42. The Conference is invited to take note of the progress of work in implementing the follow-up actions to the 2013 CES seminar on implementation of SEEA and measuring sustainable development.

43. Countries/organizations are invited to contribute to the stocktaking reports listed in para 40 above (please contact the secretariat: tiina.luige@unece.org).